APPENDIX C

COST ESTIMATES FOR REMEDIAL ACTION ALTERNATIVES

COST ESTIMATION METHODOLOGY

Cost estimates were generated for each of the six alternatives carried forward for detailed analysis in accordance with USEPA Guidance Document 540-R-00-002, *A Guide to Developing and Documenting Cost Estimates During the Feasibility Study*. As discussed in this guidance, cost estimates at the FS stage need to need accurate to within 30%/+50%. Since these cost estimates will be used to evaluate the relative costs of the various alternatives, TRC prepared each estimate using a similar level of detail and consistency of assumptions.

Note that, per EPA guidance, these estimates should not be used for developing project budgets, since there are many factors that could change after the FS is prepared and before the remedy is implemented. Changes may arise during public comment or in response to State comments, costs could change if the remedy is no implemented in a timely fashion, costs associated with design elements that are not foreseeable during the FS could arise, costs will vary depending upon the requirements of the Long Term Monitoring Plan and costs could increase or decrease due to many other variables. A more accurate cost estimate will be developed during Remedial Design.

Cost estimates and backup information for each alternative are included in the following subsections of this Appendix. For each alternative, a narrative listing the cost assumption details is provided. Following the narrative, a 2-4 page cost estimate summary table is provided to give a general overview of the capital cost elements and the operations and maintenance cost elements. Additionally, more detailed cost tables are provided for each cost element that break out the line item costs used to assemble each cost element.

Unit Costs

Unit costs were obtained from varied sources, including standard cost estimating publications, vendor quotes and, where appropriate, professional engineering experience. Many of the unit costs were obtained using R.S. Means handbooks (*Environmental Remediation Cost Data, 2000*; *Means Building Construction Cost Data, 2000*). These publications provide nation-wide average unit costs for labor, materials and equipment for numerous aspects of construction/remediation projects.

For certain location-specific items such as fill materials and temporary facilities (including utilities), unit costs were obtained by contacting local sources, authorities, and vendors as appropriate. Unit costs for items such as analytical services, equipment rental and material purchases were obtained by reviewing data from ongoing projects with similar scopes of work pertaining to each cost item (e.g., similar detection limits for analytical services). Unit costs for solidification/stabilization were developed based on the results of the treatability study and engineering experience on projects of similar size.

Quantities

Capital Costs

To support development of cost estimates for each alternative, quantities of materials to be handled, purchased or disposed were estimated. For several items quantities were estimated using measurements from site drawings. The volume of sludge present in each lagoon area was estimated as described in Appendix B of the FS Report.

Conceptual plans were developed for alternatives RAA-3, RAA-4 and RAA-7. Each of these conceptual plans delineates a footprint within the site boundaries where materials would be covered either in place or after consolidation. It should be emphasized that these conceptual diagrams do not indicate the specific locations stormwater control features, stabilized slopes, and other potential appurtenant features, but the costs of these features are included in each cost estimate.

Using these conceptual plans, quantities of materials required for cover construction and areas required for wetland compensation (assuming a 1:1 replication ratio) were estimated. Engineering estimates of the time needed to implement the various stages of each alternative were made to generate costs for rental equipment and certain labor items. Line item-specific notes/assumptions are included on the cost summary tables and sub-element cost worksheets. Consistent estimating procedures were used for each alternative.

Operation and Maintenance Costs

Operation and maintenance costs include two categories:

long term monitoring of ground water and sediment, (common to all alternatives) inspection, maintenance and repair of constructed systems (alternative specific)

Monitoring costs were estimated after discussing with EPA, the most likely sampling approach that would be incorporated into the Long Term Monitoring Plan for the site.

Adjustments to Costs

After individual unit costs and quantities were obtained, adjustments were made to provide contingencies for potential variations associated with each cost item. Initial adjustments were made to specific line item costs such as materials to be excavated or purchased and placed. As costs for various elements and/or entire alternatives were developed, additional adjustments were applied in accordance with the EPA's cost estimating guidance document (EPA, July 2000).

Volumes of material to be excavated including sludge and/or soils contaminated with waste materials were increased by 20% beyond the volumes calculated. This adjustment was made to account for required sidewall sloping given the depth of some areas of the excavation. Also, as much of the area to be excavated may be below the ground water table, significant sloughing of the sidewalls may be experienced. For alternatives RAA-3, RAA-4 and RAA-7 the volumes of

materials required to construct each cover were calculated by multiplying the area of each footprint identified in the conceptual plan by each respective layer's proposed thickness. This calculated volume was then increased by 30% to account for grading.

Additional adjustments made include those associated with overhead and profit, level of personnel protection, scope and bid contingencies, and a localization factor applied to unit costs obtained from standard cost estimating publications. Contractor overhead and profit were each applied at 10% of total sub-element cost items. Costs for work items which will be performed in Level B personnel protective equipment (PPE) were increased by 42% for labor and 60% for equipment in accordance with the guidelines presented in the Means Environmental Remediation Cost Data book. These factors account for the decreased rate of productivity when work is performed under these conditions. TRC estimated that 33% of excavation work would require Level B.

Scope and bid contingencies were applied consistent with the EPA cost estimating guidance document (EPA, July 2000). These contingencies address currently un-identified issues which may arise during development of the remedial design and implementation of the selected remedial alternative. The scope contingency applied varies based on the degree to which an alternative or technology has been proven at other sites. Exhibit 5-6 of the EPA's cost estimating guidance (EPA, July 2000) was used to select scope contingencies for each alternative evaluated. A scope contingency of 10% was applied to Alternatives RAA-3 and RAA-4. These alternatives involve relatively well-documented technologies, including excavation and cover construction. A scope contingency of 20% was applied to Alternative RAA-7 costs as this alternative includes solidification/stabilization, since there is more potential uncertainty about the productivity and there is a higher likelihood of unforeseen circumstances arising for this technology.

Bid contingencies were applied to address potential quantity overruns, modifications and change orders after award of the contract. A bid contingency of 15% was applied to Alternatives RAA-3, RAA-4 and RAA-7. The exposure to potential modifications and material overruns is considered roughly equal for these alternatives, given the highest degree of uncertainty is associated with the actual quantity of contaminated material to be covered and/or handled.

No adjustments were made to escalate costs to current-year dollars as all unit costs are considered current. The Means costs estimating manuals used incorporate costs that are current for the year 2000. An escalation factor of 1.0 was applied to these costs to update them to 2001 costs. Costs obtained from other project experience reflect currently ongoing projects. Costs obtained from vendor quotes were obtained during the period from February through May 2001.

Inflation factors associated with future project costs (O&M and periodic costs) were not applied. This is consistent with Section 4.2 of the EPA cost estimating guidance (EPA, 2000). For present worth analyzes, a discount rate of 7% was applied to all costs beyond the capital costs.

RAA-1

There are no costs for Alternative RAA-1.

RAA-2

RAA-2: Institutional Controls

ASSUMPTIONS:

- i. Discount rate for net present worth calculation of 7% per recommendation of EPA document 540-R-00-002, A Guide to Developing and Documenting Cost Estimates During the Feasibility Study.
- ii. Cost estimating sources:

Building Construction Cost Data, RS Means, 58th Edition, 2000 Environmental Remediation Cost Data, RS Means, 6th Edition, 2000 Local vendors, RI costs for Pownal Tannery, and ongoing projects

iii. Abbreviations: CY = cubic yards; CF = cubic feet; SY = square yard; SF = square feet; LF = linear feet; LS = lump sum; EA = each; MWK = man weeks; MSF = thousand square feet; MO = month; WK = week

CAPITAL COST ITEMS:

Estimated Time to Complete Alternative:

- Site Work 1 wk

6 Months

Note: Total project duration does not include seasonal impacts or delays.

2. Site Work:

Perimeter Fence: Assumed the removal of existing fence and the installation of a 7-foot high fence around the entire perimeter of the Lagoon area – approximately 5,000 LF.

Land Use Restriction: See hourly breakdown and rates included with applicable Common Cost Sub-Element Worksheets.

Alternative 2 INSTITUTIO	NAL CONTROLS					COST ESTIMATE SUMMAR
Site:	Pownal Tannery Site	Description	: Alternative	2 consists of the in		of institutional controls only. Along term monitori
ocation:	Pownal, Vt	· · · · · · · · · · · · · · · ·				osts occur in Year 0. Annual costs occur in Years :
Phase:	Feasibility Study		Periodic co	sts occur every 5 y	yrs for 30 year	rs.
Base Year: Date:	2001 Apr-01					
	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			
CAPITAL CO	JS13:			UNIT		
	DESCRIPTION	QTY	UNIT	COST	TOTAL	NOTES
Institutional (Controls					
	Perimeter Fence	1	LS	\$159,898.20	\$159,898	
	Land Use Restrictions	2	LS	\$31,882.62	\$63,765	Preparation & filing; exc controls and res restriction
SUBTOTAL				_	\$223,663	•
000/07/12					VK20,000	•
	Contingency (Scope & Bid)	10%			\$22,366	
SUBTOTAL	•			_	\$246,030	
SUBTUTAL	 				\$246,030	
	Project Management	15%			\$36,904	
TOTAL CAP	TAL COST:			F	\$282,934	'
	<u> </u>					
ANNUAL O8	kM COSTS (Year 1):			UNIT		
	DESCRIPTION	QTY	UNIT	COST	TOTAL	NOTES
Site Monitori	ng Site Inspections	2	€A	\$3,000,00	\$6,000	
	Groundwater Sampling - Equipment & Labor	.4	EA	\$32,771,92	\$131,08B	
	Groundwater Analysis - VOCs, SVOCs, Metals	60	EA.	\$2,000.00		12 locations, quarterly; inc 3 QA/QC Samples
	Groundwater Analysis - Dioxins	14	EA	\$750.00		- Semiannually; inc 2 QA/QC Samples
	Sediment Sampling - Equipment & Labor	1	EΑ	\$6,364,10	\$6,364	Community, in a 2 w vaco comples
	Sediment Analysis - VOCs, SVOCs, Metals	7	EΑ	\$1,100.00		4 locations, annually; inc 3 QA/QC Samples
	Sediment Analysis - Dioxins	5	ĒΑ	\$800.00		1 QA/QC
	SUBTOTAL	•		_	\$285,652	, area
					#200,002	
Protessional/	/Technical Support					
	Progress Reports			15%	\$42,848	
	O&M Oversite			5%	\$14,283	
SUBTOTAL				-	\$342,782	•
		•			₩0-7 2 ,1 02	
Contingency				10%	\$34,278	
	TOTAL ANNUAL O&M COST (Year 1)			Г	\$377,060	1
ANNUAL O8	LM COSTS (Years 2-3):					
	DESCRIPTION	QTY	UNIT	UNIT	TOTAL	NOTES
Site Monitoria		qi i	(INI)	COSI	IOIAL	NOTES
	Site Inspections	1	EA	\$3,000.00	\$3,000	
	Groundwater Sampling - Equipment & Labor	2	EA	\$32,771.92	\$65,544	
	Groundwater Analysis - VOCs, SVOCs, Metals	30	EA	\$2,000.00		12 locations, semi; inc 3 QA/QC Samples
	Groundwater Analysis - Dioxins	14	EA	\$750.00		- Semiannually; inc 2 QA/QC Samples
	Sediment Sampling - Equipment & Labor	1	EA	\$6,364.10	\$6,364	Construction of the Control of the C
	Sediment Analysis - VOCs, SVOCs, Metals	7	EA	\$1,100.00		4 locations, annually; inc 3 QA/QC Samples
	Sediment Analysis - Dioxin	5	EA	\$800.00		1 QA/QC
	SUBTOTAL	•		\$000.0 0	\$157,108	1 appare
	T					
rotessional	Technical Support Progress Reports			15%	\$23,566	
	O&M Oversite			5%	\$23,565 \$7,855	
SUBTOTAL	- Communication of the Communi				\$188,530	•
				4001		
Conlingency				10%	\$18,853	
SUBTOTAL						
	TOTAL ANNUAL ORM COST (Years 2-3)			Ė	\$207,382	

Alternative 2	NAL CONTROLS						COST ESTIMATE SUMMAR
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01		Description:	plan would a		nled. Capital c	n of institutional controls only. A long term monitori osts occur in Year 0. Annual costs occur in Years 1 rs.
ANNUAL OS	iM COSTS (Years 4-6):						
Site Monitoria	DESCRIPTION		OTY	UNIT	UNIT COST	TOTAL	NOTES
Site Mornion	Site Inspections		1	EA	\$3,000.00	\$3,000	
	Groundwater Sampling - Equ	ipment and Labor	1	EA	\$32,771.92	\$32,772	
	Groundwater Analysis - VOC	s, SVOCs, Metals	15	ĒΑ	\$2,000.00		12 locations, annual; inc 3 QA/QC Samples
	Groundwater Analysis - Dioxi		14	EA	\$750.00		- 12 locations; inc 2 QA/QC Samples
	Sediment Sampling - Equipm Sediment Analysis - VOCs, S		1	EA	\$6,364.10	\$6,364	
	Sediment Analysis - Dioxin	VOCS, Metals	7 5	EA EA	\$1,100.00 \$800.00	\$7,700	4 locations, annual; inc 3 QA/QC Samples 1 QA/QC
	SUBTOTAL		٧.		\$000.00	\$94,336	
Professional/	Technical Support						
	Progress Reports				15%	\$14,150	
	O&M Oversite				5%	\$4,717	
SUBTOTAL					•	\$113,203	•
Contingency					10%	\$11,320	
SUBTOTAL	,						
	TOTAL ANNUAL O&M COS	T (Years 4-6)			ī	\$124,524	1
	0.010						
PERIODIC C	0515:						
					UNIT		
DESCRIPTIC	ON .	YR	UNIT		COST	TOTAL	NOTES
		•					
	Perimeter Fence Repairs	5-30	EVENT/5 YR		\$7,994.91	\$7,994.91	5% of installation cost
	Five Year Report	5-30	ÉVENT/5 YR		\$12,000.00	\$12,000.00	
	Update Institutional Controls	5-30	EVENT/5 YR		\$3,000.00	\$3,000.00	
						\$22,994.91	
						·	
PRESENT VA	ALUE ANALYSIS:		TOTAL	TOTAL	DISCOURT	DDECTAT	
	COST TYPE	YEAR	COST	COSTAR	DISCOUNT FACTOR	PRESENT VALUE	NOTES
	Capital Cost	0	\$363,235	\$282,934	- ,	_	See support sheet for discount factors and
	Annual O&M Cost	1	\$377,060		-	-	Present Value calculation
	Annual O&M Cost	2-3	\$414,765		-	-	
	Annual O&M Cost Periodic Cost	4-6 5	\$373,571	\$124,524	-	-	
	Periodic Cost	5 10	\$26,169 \$26,169	\$22,995 \$22,995	-	-	
	Periodic Cost	15	\$26,169	\$22,995 \$22,995	-	-	Remedial Action Report
	Periodic Cast	20	\$26,169	\$22,995	-	_	noneuer negon nepon
	Periodic Cost	25	\$26,169	\$22,995		-	
	Periodic Cost	30	\$26,169	\$22,995	- '	-	
	TOTAL PRESENT VALUE O	F ALTERNATIVE			Ε	\$1,302,061	
					_		•

Alternative 2

INSTITUTIONAL CONTROLS

PRESENT VALUE ANALYSIS

Site: Pownal Tannery Site Location: Pownal, Vt Phase: Feasibility Study

Description:

Alternative 2 consists of establishing institutional controls. Capital costs occur in Year 0. Annual costs occur in Years 1-6. Periodic costs occur every 5 yrs for 30 years.

Base Year: 2001

Date: Apr-01

	Year	Capital Costs (\$)	Annual O&M Costs (\$)	Periodic Costs (\$)	Total Costs (\$)	Discount Factor at 7%	Total Present Value Cost at 7% (\$)	
<u> </u>	0	\$282,934	\$0		\$282,934	1.000	\$282,934	
	1		\$377,060		\$377,060	0.935	\$352,551	
1	2		\$207,382	•	\$207,382	0.873	\$181,045	
	3		\$207,382		\$207,382	0.816	\$169,224	
1	4		\$124,524		\$124,524	0.763	\$95,011	
	5		\$124,524	\$22,995	\$147,518	0.713	\$105,181	
1	6		\$124,524		\$124,524	0.666	\$82,933	
· ·	7.				\$0	0.623	\$0	
	8				\$0	0.582	\$0	
	9				\$0	0.544	\$0	
	10			\$22,995	\$22,995	0.508	\$11,681	
	11				\$0	0.475	\$0	
i	12				\$0	0.444	\$0	
	13			•	\$0	0.415	\$0	
,	14				\$0	0.388	\$0	
	15			\$22,995	\$22,995	0.362	\$8,324	
ļ	16				\$0	0.339	\$0	
1	17				\$0	0.317	\$0	
}	18				\$0	0.296	\$0	
1	19				\$0	0.277	\$0	
	20			\$22,995	\$22,995	0.258	\$5,933	
	21				\$0	0.242	\$0	
į.	22				\$0	0.226	\$0	
	23				\$0	0.211	\$0	
ľ	24				\$0	0.197	\$0	
	25			\$22,995	\$22,995	0.184	\$4,231	
1	26 .				\$0	0.172	\$0	
i .	27				\$0	0.161	\$0	
į.	28				\$0	0.150	\$0	
1	29				\$0	0.141	\$0	
	30			\$22,995	\$22,995	0.131	\$3,012	

TOTAL PRESENT VALUE OF ALTERNATIVE

\$1,302,061

Alternative 2									
Capital Cost PERIMETER	t Sub-Element R FENCE						COST	WORKSHEE	ΞΤ
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Stater						· · · · · · · · · · · · · · · · · · ·			
	Assuming completion time of 3 w outside perimeter of Lagoons; Ins 1' diameter.	reeks. Re stall fence	move existi post every	ing fence an / 10' with cor	ound Lagoo ncrete pads	ons 1 & 2; C placed to a	onstruct fence depth of 4' ar	earound and having a	
Cost Analys	is:								
Remove exis 7' Galvanized SUBTOTAL	DESCRIPTION sting d Chain-Link Fence	QTY 1.40 3000	UNIT 2000 LF LF	LABOR \$1.31	EQUIP \$0.00	MTRL \$26.17	UNIT TOTAL \$40,000.00 \$27.48	TOTAL \$56,000.00 \$82,440.00 \$138,440.00	
Contractor O SUBTOTAL Contractor P							5% 10%	\$6,922 \$145,362 \$14,536.20	
TOTAL UNIT	COST							\$159,898.20	
I									
; ;									
ı									
Source of Co	ost Data: Building Construction Cost Data, Environmental Remediation Cost	RS Mean Data, RS	s, 58th Edit Means, 6th	tion, 2000 n Edition, 20	900				
Cost Adjustr	ment Factor:								
	FACTOR: H&S Productivity (labor & equip)	 }		NOTES: Level D					
	Escalation to Base Year	<u> </u>			Factor of 1.0	00 for base :	wear of 2001.	cost information 2000	
	Area Cost Factor	X					code (Means)		
	Subcontractor Overhead & Prof.	X					both Overhea		
	Prime Contractor Overhead & Pro	of. X		Assuming n	narkup of 16	0% each for	both Overhea	ad and Profit.	

RAA-3

RAA-3: VT Solid Waste (Subchapter 6) Final Cover

ASSUMPTIONS:

- i. Discount rate for net present worth calculation of 7% per recommendation of EPA document 540-R-00-002, A Guide to Developing and Documenting Cost Estimates During the Feasibility Study.
- ii. Cost estimating sources:

Building Construction Cost Data, RS Means, 58th Edition, 2000 Environmental Remediation Cost Data, RS Means, 6th Edition, 2000 Local vendors, RI costs for Pownal Tannery, and ongoing projects

- iii. Abbreviations: CY = cubic yards; CF = cubic feet; SY = square yard; SF = square feet; LF = linear feet; LS = lump sum; EA = each; MWK = man weeks; MSF = thousand square feet; MO = month; WK = week
- iv. Future use of site for recreational purposes. A separate investigation and cost estimate will need to be prepared for future site development.
- v. For costing purposes, assumed that wetlands will be recreated at a 1:1 ratio.
- vi. A 1.5 conversion factor was used to convert from CY to TON for sediment/sludge cost calculations
- vii. RI determination of waste quantities adequate for implementation of RAA-3. No additional sampling required to further delineate extent of waste.

CAPITAL COST ITEMS:

Estimated Time to Complete Alternative:

- Mobilization/Demobilization:	4 wks
- Site Work	3 wks
- Excavation	3 wks
- Cover	12 wks
- Site Restoration	2 wks

6 Months

Note: Total project duration does not include seasonal impacts or delays.

1. <u>Mobilization/Demobilization</u>: Site construction activities will require office trailers and field office supplies, storage trailers, decontamination trailers, sanitary facilities, utilities (phone and electrical including connect/disconnect fees and monthly charges), and site lighting. Assumed installation of electrical poles will be necessary to bring power to the lagoon area (1 pole/150 LF). An allowance for pre-/post- construction submittals and implementation plans is included based on hourly rates for engineering and office support. See hourly breakdown included with applicable Common Cost Sub-Element Worksheet.

2. Site Work:

General Equipment: Includes construction support equipment such as site vehicles, dumpsters, and water coolers for the site office trailers. A portable generator is included to support equipment located away from electrical receptacles where using an extension cord would be impractical.

Continuous Air Monitoring: Assumed 1 laborer at \$55/hr will conduct continuous monitoring during 25% of site preparation and capping. See applicable Common Cost Sub-Element Worksheet for breakdown of monthly expense.

Clearing/Grubbing: Will need to clear and grub site to facilitate movement of construction equipment. See applicable RAA-3 Capital Cost Worksheet for additional assumptions.

Well Abandonment/Replacement: Assumed 7 wells in the lagoon area will need to be abandoned/replaced for cap construction and excavation of perimeter berm between Hoosic River and Lagoons 1 and 5. Cost estimate based on experience.

Surveying: Assumed 2-man crew with GPS at \$135/hr onsite for 1 week during general site preparation and also for 14 weeks during excavation and capping activities at 3 days/week. The unit cost estimate was based on information from an ongoing project. The Subcontractor's cost includes hours for 1 supervisor at \$50/hr and has an additional mark up to include Contractor's O&P.

Erosion-Dust Control: Assumed use of a water truck for dust suppression, the installation of silt fencing with hay bales along the access road bordering the Hoosic River (approximately 1,800 LF), and an allowance for construction of one sedimentation trap (50' x 25' x 6'). Exact location, size and grading requirements to be determined during design phase. See applicable Common Cost Sub-Element Worksheet for sedimentation basin quantity and material assumptions made for costing purposes.

Access Roads-Perimeter: A temporary road will need to be installed to the lagoon stockpile area and around the perimeter of the cap for construction (using 2,200 LF of road). Road cross-section consists of a layer of geotextile and 0.5 feet of crushed stone. See applicable Common Cost Sub-Element Worksheet for breakdown of unit cost/100 LF.

Perimeter Construction/SecurityFence: Assumed the removal of existing fence and the installation of a 7-foot high fence around the entire perimeter of the Lagoon area. See applicable RAA-3 Capital Cost Sub-Element Worksheet for additional assumptions.

Backfill Lagoon 2: Lagoon 2 will be backfilled to site grade elevation of 510' to create a staging area for site trailers, decontamination facilities and structures. The final two feet of backfill will be 1.5" crushed gravel. See applicable Common Cost Sub-Element Worksheet for additional assumptions.

Decontamination Structure – Heavy Equipment: Two, 8" thick, 25'x 65', concrete pads will be constructed in the staging area to remove sediment from equipment. Pad construction includes a 6" gravel base, a concrete curb and sump with 12" corrugated pipe around perimeter. Exact locations and size to be determined during design phase. See applicable Common Cost Sub-Element Worksheet for assumed quantities and material unit costs.

Decontamination Structure – Personnel: Two, 4" thick, 6' x 6', concrete pads will be constructed in the staging area. Pad construction includes a 4" gravel base with a concrete curb around the perimeter. Exact locations and size to be determined during design phase. See applicable Common Cost Sub-Element Worksheet for assumed quantities and material unit costs.

Dewater Standing Water in Lagoons: Standing water volume estimate of approximately 2,841,000 gal in Lagoons 1, 2, 4 and 5. Requires the use of one 300 GPM pump operating 24 hrs/day for 1 week to remove initial volume. Assumes no immediate ground water recharge. During construction, figure standing water will need to be removed approximately once per month to account for slow ground water recharge and precipitation accumulation. Dewatering of standing water assumed to be above the water table. See applicable Common Cost Sub-Element Worksheet for quantities and unit costs.

Collection & Treatment of Standing Water in Lagoons: Will treat standing water in lagoons using eight Carbon Adsorption units. Each unit consists of two vessels containing 1,000 lbs of carbon/vessel; 2,000 lbs of carbon assumed to treat 100,000 gallons. Fractionation tanks (20,000 gal/tank) will be needed to store untreated water. Discharge of treated water will occur onsite through two infiltration galleries assumed to be 20'x 5'x 5' and consisting of geotextile and riprap. Analytical testing will be conducted prior to initial discharge to ensure proper treatment.

Continuous Cleanup: Cleanup of site during construction activities – 1 laborer.

Site Restoration: Estimate from previous project. Costs to remove concrete structures, repair access roads, and clean up debris.

3. Excavation/Consolidation of Berms:

Excavation: Estimate includes excavating approximately 11,587 CY of berm material between Lagoons 1 and 5 and between Lagoons 1 and 5 and the Hoosic River to ground elevation of 505' (5 vertical feet of material), loading the material onto trucks and transporting it to a location within the cap footprint. Assuming excavation rate of 80 CY/hr using two excavators. Quantity of excavated material padded by 20%. Other costs include truck bed liners (2 liners/day) and covers (1 cover/day). Excavation assumed to be above the ground water table. Operation assumed to occur under Level D conditions.

Consolidation: Placing excavated material within cap footprint. Unit cost includes spreading and compaction of material.

Replace berms with clean fill: Unit cost includes placing unclassified fill, in 6" lifts, from off-site source that includes delivery, spreading and compaction. Riprap will be installed along the side of berm abutting the Hoosic River to add stabilization.

4. Cover:

Cap components, according to VT Solid Waste (Subchapter 6) Final Cover, from base to top: 6" subgrade, 12" sand layer, geotextile, 24" low hydraulic conductivity clay layer, 12" gas collection layer, geotextile, 26" vegetative support layer and 6" of topsoil. Top of landfill sloped 5% to 7%; sideslopes maximum of 3:1. Area of cap = 6.4 acres.

Decontamination of Heavy Equipment: Includes decontamination of 8 pieces of equipment, once/day during initial site work, excavation and capping.

Operation of Trash Pump: Cost to operate a trash pump for decontamination over period of initial site work, excavation and capping. See Common Cost Sub-Element Worksheet for decontamination of heavy equipment.

Backfill with Common Fill - Subgrade: Unit cost from Means that includes sand, loaded at the pit and dumped onsite. Price includes localization factor and markups for overhead and profit.

Sand Layer: Thickness of sand layer taken as 12" over an approximate area of 6.4 acres increased by 30% to account for side slopes. Sand ton = 6.4 acres x 1 ft x 30% increase x 1.5 TONS/CY = approx. 20,000 tons.

Geosynthetics: Two layers of geotextile installed over an area of 6.4 acres.

Gas Collection Layer: Thickness of gas collection layer taken as 12" over an approximate area of 6.4 acres increased by 30% to account for side slopes. Sand ton = 6.4 acres x 1 ft x 30% increase x 1.5 TONS/CY = approx. 20,000 tons. Gas venting wells costed by assuming 1 gas vent/ACRE at \$1,500/vent based on engineering judgment and experience.

Clay 10E-7, 6" lifts, off-site: Unit cost from Means. Includes installation of clay layer in 6" lifts, clay material from an offsite location

Granular Vegetative Layer (Sand): 26" layer of vegetative support soil over 6.4 acres. Area increased by 30% to account for side slopes. Layers to be placed in lifts of 6" and in-place density testing completed at a rate of 1 test/acre/lift. Approximate area of cap for testing \sim 8.6 acres, 4 lifts/acre. Sand ton = 6.4 acres x 1.3 x 2.2ft x 1.5 TONS/CY = approx. 44,000 tons.

Topsoil: 6" layer of topsoil over an approximate 6.4 acres increased by 30% to account for side slopes. Topsoil ton= 1.5 CY/TON x 6700 CY = approx. 10,000 tons.

Geotechnical Testing of Soil Materials: Grain size analysis at a rate of 1 test/500 tons of material for gas collection layer, granular drainage layer and topsoil.

Drainage Structures: Estimate of material required to build drainage structures for landfill cap assuming drainage swale around perimeter of cap footprint (approx. 3,000 LF) width of 10' and depth of 2', consisting of 10 to 100 lb riprap over nonwoven geotextile. An allowance for two heavy stone riprap areas of ~200 sf were assumed for construction of heavy drainage outlet structures.

Erosion Control Blankets: Installation of blankets over cap area of 6.4 acres. Unit cost from Means.

Seeding/Mulch/Fertilizer: Application over cap area of 6.4 acres. Unit cost from Means.

Land Use Restriction: See hourly breakdown and rates included with applicable Common Cost Sub-Element Worksheets.

Wetland Mitigation: Assuming 1:1 replacement of 2.4 acres of wetlands with locations of recreated wetland areas to be determined at the design stage.

	APTER 6 FINAL COVER					COST ESTIMATE SUMMARY
Site: Location:	Pownal Tannery Site Pownal, Vt					ce, with land use restrictions. Capital costs occur in dic costs occur every 5 yrs for a 30 year period.
Phase: Base Year:	Feasibility Study					
Date:	Apr-01 .					
CAPITAL CO	DSTS:					
	DESCRIPTION	QΤY	UNIT	UNIT	TOTAL	NOTES
	DESCRIPTION	QII	DMI	COST	TOTAL	NOTES
Mobilization	/ Demobilization					
	Construction Equipment Submittals/Implementation Plans	2 1	LS LS	\$1,765.48 \$100,985.69	\$3,531 \$100,986	Excavators, loaders, etc.
	Temporary Facilities & Utilities	i	LS	\$56,919.51	\$56,920	
	Field Office Supplies	1	LS	\$14,519.33	\$14,519	
	Post-Construction Submittals	1	LS	\$29,481.95		Post-construction report
	SUBTOTAL				\$205,437	
Site Work						•
	General Equipment	1	LS	\$31,027.44	\$31,027	
	Continuous Air Monitoring	6	MO	\$5,120.17	\$30,721	
	Clearing/Grubbing Well Abandonment/Replacement	1 7	LS EA	\$13,240.67 \$5,775.00	\$13,241 \$40,425	
	Surveying	48	DAY	\$1,709.40		2-man crew
	Erosion/Dust Control Measures	1	LS	\$25,946,32	\$25,946	
	Access Roads	22	100 LF	\$1,657.30		Roads around perimeter of Lag 1.3, & 5
	Perimeter Fence	1	LS	\$159,898.20	\$159,898	
	Backfill Lagoon 2 Decontamination Structure - Heavy Eq	1 2	LS LS	\$506,827.00 \$29,360.54	\$506,827 \$58,721	
,	Decontamination Structure - Personnel	2	EA	\$311.13	\$622	
	Dewater Standing Water in Lagoons	1.5	WK	\$9,940.27	\$14.910	
	Collect and Treat Standing Water	2.5	wĸ	\$123,528.43	\$308,821	
	Decon. Frac Tank	20	EA	\$1,000.00	\$20,000	
	Continuous Cleanup Site Restoration	20	MWK LS	\$819.22 \$5,000.00	\$16,384 \$5,000	
	SUBTOTAL	•	-	45,000.00_	\$1,351,057	
Excavation/	Consolidation of Berms Excavation	1	LS	\$108,248.29	\$108,248	
	Consolidate under cap	13,904	CY	\$0.96	\$13,310	
	Replace berms with clean fill	1	LS	\$528,734.33	\$528,734	
	SUBTOŤAL				\$650,293	3
Cover						
	Decontamination of Heavy Equipment	720	EA	\$220.44		Means including O&P and localization factor
	Operation of Trash Pump Backfill w common fill - subgrade	90 6,195	DAY CY	\$156.91 \$21.01	\$14,122 \$130,132	
	Sand Layer	1	LS	\$324,125.75	\$324,126	
	Gas Collection Layer	1	LS	\$332,580.78	\$332,581	
	Geosynthetics	. 1	LS	\$139,531.25	\$139,531	
	Clay 10E-7, 6" lifts, Off-site Vegetative Support Layer	26,846 1	CY LS	\$15.99 \$700,978,35	\$429,230 \$700,978	Localized with O&P included
	Topsoil	1	LS	\$229,123.78	\$229,124	
	Geotechnical Testing of Soil Materials	148	EA	\$142.36		Soil Tests/500 tons of material; Grain Size
	Drainage Structures	1 .	LS	\$54,585.02	\$54,585	
	Erosion Control Blankets	40,269	SY	\$1.12	\$45,221	
	Seeding/MulctvFertifizer SUBTOTAL	40,269	SY	\$1.37	\$55,229 \$2,634,593	₩
	SUBTOTAL				φ ε, 004,050	
						•
	Land Use Restriction	1	LS	\$31,882.62	\$31,883	1
	Wetland Compensation	3	ACRE	\$46,200.00	\$138,600	
	SUBTOTAL		,		\$170,483	
SUBTOTAL				_	\$5,011,863	<u>;</u>
	Contingency (Scope & Bid)	25%			\$1,252,965.78	
	Commigency (Scope & Dity)	2376			\$1,202,900.10	
SUBTOTAL				<u></u>	\$6,264,829	5
	Project Management	5%			\$313,241	
	rioject wanagement					
	Remedial Design	8%			\$501,186	3
	Remedial Design Construction Management	6% 6%		•	\$375,890)
	Remedial Design			•	\$375,890	

Description	Atternative 3 VT SUBCHA	APTER 6 FINAL COVER					COST ESTIMATE SUMMAR
Versil V			Description;	Alternative 3	consists of capping		
NAME Content			-				
Date							
DESCRIPTION							
DESCRIPTION	NNUAL O	BM COSTS (Year 1):					
Sile Monitorins		· ·					
Cap Inspections		DESCRIPTION	QTY	UNIT	COST	TOTAL	NOTES
Monlings (Cylesia) 227 MSF 32.84 5940 Lamn, lifting mower, 487 - 557 Including CIAP 100 12	Site Monitori						
Groundwist Samplers - Enginement and Labor 4							
Groundward Analysis - Lock, SVICS, Melals 60 FA \$2,000.00							
Groundwate Analysis - Doors 14							
Sedment Sampling - Equipment and Labor 1							
Sediment Analysis - VoCos, SVOCos, Metals 7					•		
Sediment Analysis - Dioxins S							
SUBTOTAL Support CASA Technical Report CASA Te							
ORM Technical Report ORM Oversite UBCTOTAL ANNUAL ORM COST (Year 1) TOTAL ANNUAL ORM COST (Year 2-3): UNUAL ORM COST (Year 2-3): DESCRIPTION Graph Inspections 1 FA S3,000 0 \$3,000 Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections Cap Inspections 1 FA S3,000 0 \$3,000 Cap Inspections 1 FA S3,000 0 \$10,000 S10,000		SUBTOTAL			4000.00	~~	-
ORM Technical Report ORM Oversite URETOTAL ORM Oversite 195 \$14,330 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$343,911 2010 \$100 \$100 \$100 \$100 \$100 \$100 \$100	·mfessional/	Technical Support					
OSM Oversite 956 \$14,330 \$243,911					15%	\$42 090	1
SUBSTOTAL S343,911							
10% \$34,391	SUBTOTAL						-
NAMIJAL O&M COSTS (Years 2-3): OBSCRIPTION QTY	Cantina						
DESCRIPTION QTY	_onungency				10%	\$34,391	
DESCRIPTION		TOTAL ANNUAL O&M COST (Year 1)			Е	\$378,302	1
DESCRIPTION		200000000000000000000000000000000000000					
DESCRIPTION QTY UNIT COST TOTAL NOTES	NNUAL O&	M COS1S (Years 2-3):			HNIT		
Cap Inspecitions			QTY	UNIT		TOTAL	NOTES
Movings (2)/psar)	Site Monitorin						
Groundwater Analysis - VOCs, SVOCs, Metals 2							
Groundwater Analysis - Dioxis 30							
Strouthwater Analysis - Dioxins 14							
Sediment Amplies - Equipment and Labor 1			-				
Sediment Analysis - VOCs, SVCCs, Metals 7							
Sediment Analysis - Dioxins S							
SUBTOTAL Professional/Technical Report							
15% \$22,707			•	<u>.</u>	3000.00		
15% \$22,707 \$1,902 \$18,966 \$1,902 \$18,966	Professional/	Technical Support					·
State					15%	\$23,707	
S189,658 S189,658 S18,966 SUBTOTAL S208,624 SUBTOTAL SUBTOTAL S10,000 S3,000		O&M Oversite					
SUBTOTAL TOTAL ANNUAL 0&M COST (Years 2-3)	SUBTOTAL				_		
SUBTOTAL TOTAL ANNUAL 0&M COST (Years 2-3)	`ontingency				4007	640.000	
S208,624 S208,625					70%	\$18,966	
DESCRIPTION QTY UNIT COST TOTAL NOTES	SUBTOTAL						
DESCRIPTION QTY UNIT COST TOTAL NOTES		TOTAL ANNUAL O&M COST (Years 2-3)			Г	\$208,624	1
DESCRIPTION QTY UNIT COST TOTAL NOTES	ARILLET CO.	M COCTE Of					-
DESCRIPTION	MNUAL U&	M COSTS (Years 4-6):			UNIT		
EA \$3,000.00 \$3,000 \$3			QTY	UNIT		TOTAL	NOTES
Mowings (2/year)	ite Monitorin					_	
Mowings (2/year)			1	EA	\$3,000.00	\$3,000	
Groundwater Sampling - Equipment and Labor 1			227	MSF			
Groundwater Analysis - Dioxins 14							
Sediment Sampling - Equipment and Labor 1							
Sediment Analysis - VOCs, SVOCs, Metals 7							- Inc 2 QA/QC Samples
Sediment Analysis - Dioxins Sediment Analysis - Dioxins Subtotal							
SUBTOTAL \$95,277 Increasional/Technical Support 08M Technical Report O&M Oversite 5% \$4,764 UBTOTAL \$114,332 UBTOTAL 10% \$11,433							
rofessional/Technical Support O&M Technical Report O&M Oversite UBTOTAL O&M Oversite 15% \$14,291 5% \$4,764 \$114,332 Onlingency 10% \$11,433			5	ĿΑ	\$800.00		
O&M Technical Report O&M Oversite 15% \$14,291 5% \$4,764 \$114,332 UBTOTAL 5% \$4,764 \$114,332						ಹಿಎಎ' ೯ 1 ಕ	
O&M Oversite					150/	84400	
UBTOTAL \$114,332 Ontingency 10% \$11,433 UBTOTAL			•				
Ontingency 10% \$11,433 UBTOTAL					3%		
SUBTOTAL TOTAL NAMED CON CONTROL	Contingency				100/	·	· .
TOTAL NUMBER CO					10%	\$11,433	
TOTAL ANNUAL 08M COST (Years 4-6)	JBTOTAL .						
- , I VIEVIVV I		TOTAL ANNUAL O&M COST (Years 4-6)			Г	\$125,765	1

nal Tannery Site nal. Vt							MMAF
sibility Study I 01						and use restrictions. Capital oc occur every 5 yrs for a 30 year	
S:							
	YR	QTY	UNIT	UNIT COST	TOTAL	NOTES	
meter Fence Repairs	5	1	EA	\$7,994,91	\$7,994.91 5% of in	stallation cost	
Erosion, Seeding Repairs	5	1	ΈA	\$65,864,83		cap installation	
		1					
ate Institutional Controls	5	1	EA	\$3,000.00	\$3,000.00 \$88,859.74		
meter Fence Repairs	10-30	. 1	EA	\$7,994,91	\$7,994.91 5% of in	stallation cost	
Erosion, Seeding Repairs	10-30	1	EA	\$39,518,90	\$39,518.90 1.5% of	cap installation	
Year Report	10-30	1	EA	\$12,000.00	\$12,000.00		
ate Institutional Controls	10-30	1	EA	\$3,000.00			
	neter Fence Repairs Erosion, Seeding Repairs Year Report ste Institutional Controls neter Fence Repairs Erosion, Seeding Repairs	YR meter Fence Repairs Erosion, Seeding Repairs 5 Year Report 5 ste Institutional Controls 5 meter Fence Repairs 10-30 Erosion, Seeding Repairs 10-30 Year Report 10-30	## Property 10-30 1	YR QTY UNIT meter Fence Repairs 5 1 EA Erosion, Seeding Repairs 5 1 EA Year Report 5 1 EA neter Fence Repairs 10-30 1 EA Erosion, Seeding Repairs 10-30 1 EA Year Report 10-30 1 EA	The state of the s	The true of the first true of	The state of the s

ESENT VA	LUE ANALYSIS:		TOTAL	TOTAL	DISCOUNT	PRESENT	
	COST TYPE	YEAR	COST	COST/YR	FACTOR	VALUE	NOTES
	Capital Cost	. 0	\$7,558,862	\$7,487,029	-	_	See support sheet for discount factors and
	Annual O&M Cost	1	\$378,302	\$378,302	-	-	Present Value calculation
	Annual O&M Cost	2-3	\$417,248	\$208,624	_	_	
	Annual O&M Cost	4-6	\$377,295	\$125,765	-	-	
	Periodic Cost	5	\$92,034	\$88,860		-	
	Periodic Cost	10	\$65,688	\$62,514	-	-	
	Periodic Cost	15	\$65,688	\$62,514	-		Remediat Action Report
	Periodic Cost	20	\$65,688	\$62,514	-		
	Periodic Cost	25	\$65,688	\$62,514	_	-	•
	Periodic Cost	30	\$65,688	\$62,514	-	-	
	TOTAL PRESENT VALUE OF A	ALTERNATIVE				\$8,409,893	
							
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Alternative 3

VT SUBCHAPTER 6 FINAL COVER

PRESENT VALUE ANALYSIS

Site: Pownal, Vt Feasibility Study Location: Phase:

Pownal Tannery Site Description: Alternative 3 consists of capping of waste in place with land use restrictions. Capital costs occur in Year 0. Annual costs occur in Years 1-6. Periodic costs occur every 5 yrs for

Base	Year:	2001
Date		Apr-01

Year	Capital Costs (\$)	Annual O&M Costs (\$)	Periodic Costs (\$)	Total Costs (\$)	Discount Factor at 7%	Total Present Value Cost at 7% (\$)
0	\$7,280,862	\$0		\$7,280,862	1.000	\$7,280,862
1		\$378,302		\$378,302	0.935	\$353,712
2		\$208,624		\$208,624	0.873	\$182,129
3		\$208,624		\$208,624	0.816	\$170,237
4		\$125,765		\$125,765	0.763	\$95,959
5		\$125,765	\$88,860	\$214,625	0.713	\$153,027
6		\$125,765		\$125,765	0.666	\$83,759
7				\$0	0.623	\$0
8				\$0	0.582	\$0
9				\$0	0.544	\$0
10			\$62,514	\$62,514	0.508	\$31,757
11				\$0	0.475	\$0
12				\$0	0.444	\$0
13			•	\$0	0.415	\$0
14				\$0	0.388	\$0
15			\$62,514	\$62,514	0.362	\$22,630
16				\$0	0.339	\$0
17				\$0	0.317	\$0
18		•		\$0	0.296	\$0
19				\$0	0.277	\$0
20			\$62,514	\$62,514	0.258	\$16,129
21				\$0	0.242	\$0
22				\$0	0.226	\$0
23				\$0	0.211	\$0
24				\$0	0.197	\$0
25			\$62,514	\$62,514	0.184	\$11,503
26				\$0	0.172	\$0
27				\$0	0.161	\$0
28				\$0	0.150	\$0
29				\$0	0.141	\$0
30			\$62,514	\$62,514	0.131	\$8,189

TOTAL PRESENT VALUE OF ALTERNATIVE

\$8,409,893.

	Sub-Element TION EQUIPMENT - MOB/DEM	ОВ					COST	WORKSI	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Stater	ment: Mobilization and demobilization	costs for ta	rae eauip	ment.					
:			•						
Cost Analys	sis:								
DESCRIPTION DOZET		QTY 2	UNIT	LABOR	EQUIP \$274	MTRL	UNIT TOTAL \$274	TOTAL \$548.00	
Backhoe/FE Excavator Loader	Loader _	1 2 1	EA EA EA	-	\$274 \$274 \$274	- -	\$274 \$274 \$274	\$274.00 \$548.00 \$274.00	
Roller		i	ĒĀ	-	\$274	-	\$274	\$274.00 \$1,918.00	•
Area Cost Fa	actor						69%	\$1,323.42	
Subcontracti SUBTOTAL	,						5%	\$66.17 \$1,389.59	
Subcontracte SUBTOTAL Contractor C							10% 5%	\$138.96 \$1,528.55 \$76.43	
SUBTOTAL Contractor P						•	10%	\$1,604.98 \$160.50	
TOTAL UNIT	r cost							\$1,765.48	
Source of C	ost Data: Building Construction Cost Data	a, RS Means	s, 58th Ed	dition, 2000					
Cost Adjust	ment Factor:								
	FACTOR; H&S Productivity (labor & equip	,		NOTES: Not Applica	abie				
	Escalation to Base Year					.00 for base	e year of 2001	, cost informatio	n 2000
	Area Cost Factor	Х				•	code (Means	•	
	Subcontractor Overhead & Prof. Prime Contractor Overhead & F			_				ead and Profit.	
		لنثا		,		- /U - CACHT II			

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Common costs Capital Cost Sub-Element
SUBMITTALS & IMPLEMENTATION PLANS **COST WORKSHEET** Site: Pownal Tannery Site Location: Pownal, Vt Phase: Feasibility Study Base Year: <u>Арг-</u>01 Date: Work Statement: Preconstruction submittals are assumed to include health and safety plan, construction QA/QC plan and spilf prevention plan. Cost Analysis: UNIT DESCRIPTION QTY UNIT LABOR **EQUIP** TOTAL MTRL TOTAL Engineering Permitting 320 HR \$75.00 \$0.00 \$0.00 \$75.00 \$24,000.00 Design 480 HR \$75.00 \$0.00 \$0,00 \$75.00 \$36,000.00 Meetings 100 HR **\$75.00** \$0.00 \$0.00 \$75.00 \$7,500.00 Office Support Support staff Office Expenses 80 HR \$40.00 \$0.00 \$0.00 \$40.00 \$3,200.00 LS \$0.00 \$0.00 \$5,000.00 \$5,000.00 \$5,000.00 SÚBTOTAL \$75,700.00 Subcontractor Overhead 5% \$3,785.00 SUBTOTAL \$79,485.00 Subcontractor Profit 10% \$7,948.50 SUBTOTAL \$87,433.50 Contractor Overhead \$4,371.68 5% SUBTOTAL \$91,805,18 Contractor Profit 10% \$9,180.52 TOTAL UNIT COST \$100,985.69

Source of Cost Data:

Engineering judgement

Alternative 3									
	Sub-Element						COST	WORKS	HEET
TEMPORAR	Y FACILITIES AND UTILITIES						0031	VVOINIS	
Site:	Pownal Tannery Site								1
Location:	Pownal, Vt								
Phase:	Feasibility Study								ļ
Base Year:	2001								Į.
Date:	Apr-01								Ì
Work Staten	cont-								
VIOIR State	Assuming onsite construction time of 2	23.2 weel	cs at 4 we	eks/month l	nstall additi	opal nower n	noles to large	uu atea.]
	1 pole/150' over an approximate distar			20100111011011	101311 00311	endi potroi p	Diod to logo.		
			- ,						i
	e e								
Cost Analys	is:								
-	•								
							UNIT		
DESCRIPTION	DN (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	1
	Temporary Storage Trailer (2 units)	2	EA	-	-	-	\$340	\$680.00	
	torage Trailer (2 units)	12.00	MO	-	-	.•	\$150	\$1,800.00	
Temporary F		1,650	LF				6.90	\$11,385,00	1
	ets - Chemical (3 units)	18.00	MO	•	•	-	\$75	\$1,350.00	.]
	Temporary Office with steps (2 Units)	2	EA	-	-	-	\$430	\$860.00	
	Office with steps (2 Units)	12.00	MO	-	-	-	\$540	\$6,480.00	1
	poles (price for 2 poles)	2	EA	-	-	-	\$2,847	\$5,694.00	1
•	ction/disconnection	1	EA	\$0	\$0	\$2,000	\$2,000	\$2,000.00 .	1
	ne and electric)	6.00	MO	\$0	\$0	\$500	\$500	\$3,000.00	
SUBTOTAL	- Local							\$33,249.00	1
DESCRIPTION	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	1
Decontamina	ition Trailer	6.00	MO	\$0	\$0	\$2,275	\$2,275	\$13,650.00	
Area Cost Fa	actor						69%	\$9,418.50	i
	(Local and Means)						0378	\$42,667.50	
Subcontracto	or Overbead						5%	\$2,133.38	
SUBTOTAL							078	\$44,800.88	ŀ
Subcontracto	or Profit					•	10%	\$4,480.09	
SUBTOTAL								\$49,280.96	t t
Contractor O	verhead						5%	\$2,464.05	l.
SUBTOTAL								\$51,745.01	
Contractor Pr	rofit						10%	\$5,174.50	
TOTAL UNIT	COST							\$56,919.51	_
								V43/2122	
	•								
		-							•
					,				
									ŀ
Source of Co	ost Data:								
	Environmental Remediation Cost Data	RS Mea	os 6th F	dition 2000					
	Local unit costs from on ongoing proje								
Cost Adjustr	ment Factor:								
-				NOTES					
	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)			Not Applica	ioie				
	Escalation to Base Year			Escalation .	Factor of 1.	00 for base y	ear of 2001,	cost information	2000
	Area Cost Factor	X				•	code (Means		.]
	<u>.</u>					-	·	•	ŀ
	Subcontractor Overhead & Prof.	Х		Assuming r	narkup of 1	0% each for	both Overhe	ad and Profit.	j
	Prime Contractor Overhead & Prof.	X		Assuming r	narkup of 1	0% each for	both Overhe	ad and Profit.	ŀ
	,			3	•	•			

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Common Costs
Capital Cost Sub-Element
FIELD OFFICE SUPPLIES

COST WORKSHEET

Site:

Pownal Tannery Site Pownal, Vt

Location: Phase:

Feasibility Study

Base Year: 2001 Date:

Apr-01

Work Statement:

Purchase miscellaneous field office supplies.

Cost Analysis:

DESCRIPTION Office Supplies	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL	
Office Supplies								
Cordless phone with answering machine	2	EA	\$0.00	\$0.00	\$90.00	\$90.00	\$180.00	
Computer	2	MO	\$0.00	\$0.00	\$480.00	\$480.00	\$960.00	\$40/MO for 6Mc
Surge Protectors	2	EΑ	\$0.00	\$0.00	\$28.49	\$28.49	\$56.98	
Floppy disks	2	PACK	\$0.00	\$0.00	\$9.99	\$9.99	\$19.98	40/PACK
Printer/fax/copier .	1	EA	\$0.00	\$0.00	\$199.97	\$199.97	\$199.97	
HP Printer toner	20	EA	\$0.00	\$0.00	\$29.99	\$29.99	\$599.80	
Standard Task Chair	5	EA	\$0.00	\$0.00	\$119.75	\$119.75	\$598.75	
Standard Folding Chair	5	CARTON	\$0.00	\$0.00	\$77.35	\$77.35	\$386.75	5/CARTON
Shelving	2	EA	\$0.00	\$0.00	\$317.50	\$317.50	\$635.00	H74xW36xD21
Folding Tables - Heritage Series	2	EΑ	\$0.00	\$0.00	\$102.15	\$102.15	\$204.30	H29xW30xL96
Pens	10	PACK	\$0.00	\$0.00	\$3.89	\$3.89	\$38.90	60/PACK
Paper	20	CASE	\$0.00	\$0.00	\$20.99	\$20.99	\$419.80	5000/CASE
Pencils	10	PACK	\$0.00	\$0.00	\$3.19	\$3:19	\$31.90	48/PACK
Highlighters	5	PACK	\$0.00	\$0.00	\$4.35	\$4.35	\$21.75	43/PACK
Notepads	10	EA	\$0.00	\$0.00	\$4.35	\$4.35	\$43.50	
Sharpies (thick)	25	EΑ	\$0.00	\$0.00	\$1.52	\$1.52	\$38.00	
Sharpies (Thin)	50	EΑ	\$0.00	\$0.00	\$0.79	\$0.79	\$39.50	
Stapler	4	EA	\$0.00	\$0.00	\$9.99	\$9.99	\$39.96	
Staples	2	BOX	\$0.00	\$0.00	\$2.99	\$2.99	\$5.98	1000/BOX
Staple remover	4	EA	\$0.00	\$0.00	\$0.69	\$0.69	\$2.76	
Scotch Tape	5	EA	\$0.00	\$0.00	\$1.22	\$1.22	\$6.10	
Paper clips	5	PACK	\$0.00	\$0.00	\$1.69	\$1.69	\$8.45	1000/PACK
Binder clips	5	PACK	\$0.00	\$0.00	\$3.55	\$3.55	\$17.75	60/PACK
Masking tape	5	PACK	\$0.00	\$0.00	\$5.29	\$5.29	\$26.45	4/PACK
Hanging folders	5	BOX	\$0.00	\$0.00	\$3.99	\$3.99	\$19.95	25/BOX
Manila folders	2	BOX	\$0.00	\$0.00	\$4.19	\$4.19°	\$8.38	100/BOX
Scissors	4	PACK	\$0.00	\$0.00	\$16.25	\$16.25	\$65.00	2/PACK
Engineer's scale	5	EA	\$0.00	\$0.00	\$3.65	\$3.65	\$18.25	
Tacks	5	PACK	\$0.00	\$0.00	\$0.25	\$0.25	\$1.25	100/PACK
Post-it-notes (4"X6")	5	PACK	\$0.00	\$0.00	\$6.99	\$6.99	\$34.95	6/PACK
Post-it-notes (3"X4")	• 5	PACK	\$0.00	\$0.00	\$10.99	\$10.99	\$54.95	12/PACK
Post-it-notes (1.5"X2")	5	PACK	\$0.00	\$0.00	\$4.19	\$4.19	\$20.95	12/PACK
Mag-Lite Flashlight	5	EA	\$0.00	\$0.00	\$24.95	\$24.95	\$124.75	L=8.5"
Batteries (AA)	10	PACK	\$0.00	\$0.00	\$6.15	\$6.15	\$61.50	8/PACK
Batteries (AAA)	5	PACK	\$0.00	\$0.00	\$8.49	\$8.49	\$42.45	12/PACK
Batteries (C)	5	PACK	\$0.00	\$0.00	\$9.99	\$9.99	\$49.95	8/PACK
Soft Wastbaskets	4	EΑ	\$0.00	\$0.00	\$8.20	\$8.20	\$32.80	H19xW15xD11
55-gał Waste Containers	5	ĖA	\$0.00	\$0.00	\$62.95	\$62.95	\$314.75	
Paper towels	50	PACK	\$0.00	\$0.00	\$15.75	\$15.75	\$787.50	15/PACK
Trash bags	50	PACK	\$0.00	\$0.00	\$8.49	\$8.49	\$424.50	50/PACK
Broom	1	EA	\$0.00	\$0.00	\$6.49 \$9.19	\$0.49 \$9.19	\$424.50 \$9.19	JUITAUN .
Dust pan	1	EA	\$0.00	-			-	
Disinfectant Cleaner	5		-	\$0.00	\$5.15	\$5.15 \$5.50	\$5.15	
First Aid Kit		EA	\$0.00	\$0.00	\$6.59	\$6.59	\$32.95	
	1	EA	\$0.00	\$0.00	\$26.10	\$26.10	\$26.10	
Emergency Eye Wash Station	1	EA .	\$0.00	\$0.00	\$24.15	\$24.15	\$24.15	
Extension cord (50')	3	EA	\$0.00	\$0.00	\$19.90	\$19.90	\$59.70	
Locks (2")	10	EA	\$0.00	\$0.00	\$11.55	\$11.55	\$115.50	
Locks (3/4")	10	EA	\$0,00	\$0.00	\$8.25	\$8.25	\$82.50	
Shipping Allowance	1	LS	-	-	-	\$5,000.00	\$5,000.00	
SUBTOTAL							\$11,999.45	•

Common Costs				
Capital Cost Sub-Element FIELD OFFICE SUPPLIES		CO	ST WORKSH	EET
THE OF THE OF THE O	· · · · · · · · · · · · · · · · · · ·			
Subcontractor Profit SUBTOTAL		10%	\$1,200 \$13,199	
Prime Contractor Profit		10%	\$1,319.94	
TOTAL UNIT COST			\$14,519	
Source of Cost Data: Equipment and supplies from local	vendors.			
Cost Adjustment Factor:				
FACTOR; H&S Productivity (labor & equip)	NOTES: No labor involved, materia	al costs		
Escalation to Base Year	2001 material costs			
Area Cost Factor	No area cost factor applied	d; Not applicable		
Subcontractor Profit	X Assuming markup of 10%			
Prime Contractor Profit	X Assuming markup of 10%			•
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Capital Cost Su POST-CONSTI	ub-Element RUCTION SUBMITTALS						COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownat, Vt Feasibility Study 2001 Apr-01			-				
Work Stateme	nt:							
Cost Analysis:								
DESCRIPTION Engineering	1	QTY 240	UNIT HR	LABOR \$75.00	EQUIP \$0.00	MTRL \$0.00	UNIT TOTAL \$75.00	TOTAL \$18,000.00
Office Support Support sta Office Expe SUBTOTAL		40 1	HR LS	\$40.00 \$0.00	\$0.00 \$0.00	\$0.00 \$2,500.00	\$40.00 \$2,500.00	\$1,600.00 \$2,500.00 \$22,100.00
Subcontractor (SUBTOTAL Subcontractor F							5% 10%	\$1,105.00 \$23,205.00 \$2,320.50
SUBTOTAL Contractor Over SUBTOTAL Contractor Profi							5%	\$25,525.50 \$1,276.28 \$26,801.78
TOTAL UNIT CO							10%	\$2,680.18 \$29,481.95
Source of Cost	t Data: Engineering judgement							

Alba and a street of	· · · · · · · · · · · · · · · · · · ·								
Alternative 3 Capital Cost	Sub-Element								
	RAL EQUIPMENT & SUPPLIES						COS	T WORKS	HEET
	The state of the s								
Site:	Pownal Tannery Site								
Location:	Pownal, Vt			-				•	
Phase:	Feasibility Study								
Base Year:	2001								
Date:	Apr-01								
Work Staten	nent:		-						
	Assuming total time onsite of a capping; 2 wks site restoration;	pprox 6 mon 8 wks wetlar	ihs: 4 wk nds resto	s mob/demo eration (5 wk	b; 3 wks site s concurrent	prep; 2 wks with other ta	s excavation; asks).	12 wks	
Cost Analys	is:								
							UNIT		
DESCRIPTION	, ,	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	i
Construction	-	4	EA	\$0.00	\$0.00	\$82.80	\$82.80	\$331.20	
	ve Dumpsters	2	EA	-	-	-	\$100.00	\$200.00	
Dumpsters (2		12.00	MO	-	-	-	\$30.00	\$360.00	
	ve Waler Coolers	2	ËΑ	-	-	-	\$100.00	\$200.00	
Water Coole	r (2 Units)	12.00	МО	-	-	-	\$125.00	\$1,500.00	
SUBTOTAL	•						•	\$2,591.20	
DESCRIPTION	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
SUV Rental	,	6.00	MO		\$0.00	\$720.00	\$720.00	\$4,320.00	
Pickup Truck	Rental	6.00	MO	\$0.00	\$0.00	\$720.00	\$720.00	\$4,320.00	
Generator 25		6.00	MO	\$0.00	\$3,000.00	\$0.00		\$18,000.00	l
SUBTOTAL				V 0.00	40,000.00	QU .00	4 0,000.00	\$26,640.00	
Area Cost Fa	actor						69%	\$18,381.60	
SUBTOTAL	(Local & Means)					•		\$20,973	
 Subcontracto	or Overhead						5%	\$1,049	
SUBTOTAL							570	\$22,021.44	
Subcontracto	or Profit						10%	\$2,202.14	1
SUBTOTAL							7070	\$24,223.58	
DESCRIPTION	ON (Subcontractor Costs)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Weather Star		6.00	MO	\$0.00	\$0.00	\$360.00	\$360.00	\$2,160.00	ı
Carnera		24	WK .	\$0.00	\$0.00	\$5.00	\$5.00	\$120.00	
Tool Box		6.00	MO	\$0.00	\$0.00	\$60.00	\$60.00	\$360.00	ļ
7007001	•	0.00	ino	Ψ0.00	\$0.00	450.00	ψυυ,υυ	\$2,640.00	
SUBTOTAL	(Local, Means & Sub)							\$26,863.58	
Contractor O	verhead		-				5%	\$1,343.18	İ
SUBTOTAL	•							\$28,206.76	
Contractor Pi	rofit						10%	\$2,820.68	
TOTAL UNIT	COSTS				•			634 027	
TOTAL OILL	00010							\$31,027	
Source of Co	ost Data:			•					
	Local vendor and costs from int Building Construction Cost Data	•							
Cost Adjustr	ment Factor:								
	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)			3 - 42% Labo	or and 60% !	Equipment: n	ot applicable	j
	Escalation to Base Year							cost information 2	2000
	Area Cost Factor	X			zation factor				
	Subcontractor Overhead & Prof							ad and Profit.	ľ
_	Prime Contractor Overhead & P	لسا		•	-			ad and Profit. ad and Profit.	ŀ
-	Journalous Cremeau a F	··~·		nasuminy	mainup OF II	10 caus 101	oom overne	au airu FiVIII.	

-Flement							
AIR MONITORING						COST	WORKSHE
ownal Tannery Site ownal, Vt assibility Study 01 r-01					·		
t: intinuous air monitoring around si	ite perim	eter at 8 l	hrs/day and 5	days/wk. C	onducted du	ring full imple	ementation
each alternative.							
Local)	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL
detector - Rent	1	MO	\$0.00	\$0.00	\$640.00	\$640.00	\$640.00
ic MG140 gas meter							\$120.00
CO, H2S, O2, Pentane Cal gas	0.5	CYL	\$0.00	\$0.00	\$300.00	\$300.00	\$400.00 \$150.00 \$1,310.00
verhead			*-			5%	\$65.50
ofit						100/	\$1,375.50
			•		.=	10%	\$137.55 \$1,513.05
Subcontractor)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
						\$360.00	\$360.00
5/hr)	0.25	MO	\$8,800.00	\$0.00	\$0.00	\$8,800.00	\$360.00 \$2,200.00 \$2,920.00
al and Subcontractor)							\$4,433
ead					J.	5%	\$221.65
						10%	\$4,654.70 \$465.47
ST/MO							\$5,120.17
							<u> </u>
•							
•							
·							
ata:							
ts for rental equipment from vend	ors.						
Factor:							
FACTOR:	 1		NOTES:				
	#			alor of 4 an			
L				•			st information 2000
<u> </u>	 		•				
<u> </u>							
e Contractor Overhead & Prof.	×		Assuming ma	rkup of 10%	6 each for bo	oth Overhead	and Profit.
	wnal Tannery Site wnal, Vt asibility Study 01 r-01 : ntinuous air monitoring around si each alternative. Local) detector - Rent ic MG140 gas meter CO, H2S, O2, Pentane Cal gas rerhead offit Subcontractor) Rent (3 pair) Monitor (5 Units) 5/hr) ead ST/MO ata: is for rental equipment from vend Factor:	www.al Tannery Site wal, Vt assibility Study 01. r-01 :	wal Tannery Site wal, Vt asibility Study 01. r-01 tentinuous air monitoring around site perimeter at 8 leach alternative. Local) detector - Rent	wanal Tannery Site wanal, Vt assibility Study 01	AND MONITORING What Tannery Site What, Vt assibility Study 01 Inditious air monitoring around site perimeter at 8 hrs/day and 5 days/wk. C Beach alternative. Local) Cocal) Co	wal Tannery Site wal, Vt wal, Vt was substited to the state of the sta	Name Constitution Constitution

Alternative 3 Canital Cost	Sub-Element								
CLEAR AND							COST	WORKSHE	ET
Site: Location: Phase: Base Year: Date:	Pownat Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Stater	nent: Clear and grub Lagoons 1,2,3	3 and 5 to faci	litate evca	vation con	solidation and	t bauting 1	faterial to be	disnosed	
	of onsite.			, anoi, com		, naumig. :	naterial to be	disposed	
Cost Analys	is:								
DESCRIPTION Heavy Brush SUBTOTAL	ON without Grub, Chipping	QTY 7.32	UNIT ACRE	LABOR \$909.73	EQUIP \$1,055.00	MTRL \$0.00	UNIT TOTAL \$1,964.73	TOTAL \$14,384.57 \$14,384.57	
Area Cost Fa	actor						69%	\$9,925.35	
Subcontractor SUBTOTAL Subcontractor SUBTOTAL	or Profit						5% 10%	\$496.27 \$10,421.62 \$1,042.16 \$11,463.78	
Contractor O SUBTOTAL Contractor P							5% 10%	\$573.19 \$12,036.97 \$1,203.70	
TOTAL UNIT	COST							\$13,240.67	
		·							
Source of C	ost Data: Environmental Remediation C	Cost Data, RS	Means, 6	th Edition, 2	000				
Cost Adjust	ment Factor:								
- :	FACTOR: H&S Productivity (labor & equ	ıip)		NOTES: Level D			• .		
	Escalation to Base Year Area Cost Factor							cost information 2000)
	Subcontractor Overhead & Pr	rof. X				•	code (Means) r both Overhe		
	Prime Contractor Overhead &	Prof. X		-	•		r both Overhe		

Alternative 3 Capital Cost	Sub-Element	· ·						-
	UST CONTROL						COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01							
Work Stater	nent:							
	Dust suppression/Pass cost at \$55 excavation and cap construction - installed along access road border volume taken as 1800' x 2' x 0.5'.	арргох.	16 weeks :	at 5 days/wk	and 1 pass	/day. Sitt fe	ncing with ha	y bales tion
Cost Analys	is:						·	
Silt Fence, p Hay Bales, S Place and Re	ick - dust suppression/Pass oly, 3' high, adverse conditions	90 1800 1800 22 70	UNIT PASS LF LF TONS CY	\$0.00 \$0.37 \$0.21 \$178.00 \$2.73	EQUIP \$0.00 \$0.00 \$0.07 \$57.50 \$1.35	MTRL \$0.00 \$0.30 \$2.00 \$50.00 \$0.00	UNIT TOTAL \$166.89 \$0.67 \$2.28 \$285.50	TOTAL \$15,020.10 \$1,206.00 \$4,104.00 \$6,281.00
Sedimentation SUBTOTAL	on traps	1	LS	\$0.00	\$0.00	\$0.00	\$4.08 \$965.12	\$285.60 \$965.12 \$27,861.82
Area Cost Fa	actor						69%	\$19,225
DESCRIPTIO Water SUBTOTAL (ON (Local) (Local and means)	QTY 4.5	UNIT MO	LABOR \$0.00	EQUIP \$0.00	MTRL \$0.00	TOTAL \$50.00	TOTAL \$225.00 \$19,450
Subcontractor SUBTOTAL Subcontractor SUBTOTAL Contractor O SUBTOTAL Contractor Pr	or Profit verhead						5% 10% 5%	\$972 \$20,422 \$2,042 \$2,464 \$1,123.22 \$23,588 \$2,359
TOTAL UNIT	COST							\$25,946.32
Source of Co	ost Data: Building Construction Cost Data, R Environmental Remediation Cost D	S Means ata, RS	i, 58th Edi Means, 6t	tion, 2000; L h Edition, 20	ocal cost e	stimate from	an ongoing p	project.
Cost Adjustr	ment Factor:							
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof.			0.69 localiza	ation factor	for 052 zip o	ode (Means)	cost information 2000 ad and Profit.
	Prime Contractor Overhead & Prof.	$\overline{\mathbf{x}}$		_	•		hoth Overhe	

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Common Cost	st Sub-Element							
	ATION TRAPS		 			·	COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001							
Work Staten	nent:	•						
	Basin size of 50'x25'x6'. Inlet/Out Marked up for O&P on erosion co				6'x6'x1.5'. A	issuming 6'	" dia PE pipe.	
Cost Analys	is:							
DESCRIPTIO Geotextile no 1.5" Crushed - Delivery SUBTOTAL	on-woven	QTY 2.67 10 1	UNIT SY TON HR	LABOR \$0.00 \$0.00 \$0.00	EQUIP \$0.00 \$0.00 \$0.00	MTRL \$0.00 \$5.50 \$0.00	UNIT TOTAL \$1.50 \$5.50 \$40.00	\$4.00 \$55.00 \$40.00 \$99.00
	ON (Means) Riprap, Heavy (25 to 500 lb) Polyvinyl Chloride Pipe	QTY 278 6 20	UNIT CY CY LF	\$0.34 \$3.00 \$1.72	EQUIP \$1.66 \$2.38 \$4.59	MTRL \$0.00 \$15.78 \$2.87	TOTAL \$2.00 \$21.16 \$9.18	TOTAL: \$555.56 \$126.96 \$183.60 \$866.12
SUBTOTAL								\$965.12
					,			
Source of C	Sost Data: Subcontractor estimate - geotexti Environmental Remediation Cost Building Construction Cost Data, Marked up for O&P on element si ment Factor:	Data, RS RS Means	Means, 6t i, 58th Edi	th Edition, 20 ition, 2000	00	cal borrow	source obtair	ned on 2/27/01.
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Pref.			0.69 localiz Assuming (ration factor markup of 1	for 052 zip 0% each fo	code (Means or both Overh	, cost information 2000 s) ead and Profit. ead and Profit.

Common Co		-							
TEMPORAL	t Sub-Element RY ACCESS ROADS (COST PER 10	OLF)					COST	WORKS	HEET
Site:	Pownal Tannery Site								
Location:	Pownal, Vt								
Phase:	Feasibility Study								
Base Year:	2001								
Date:	Apr-01								
Work State	ment: Install temporary access roads for tr	ansport of	excavate	ed materials.	6 inches of	crushed sto	ne		
Cost Analy:				o maionaio.	o mones es	Granica sto			
DECCRIPTI	ON (Least)						UNIT		
DESCRIPTI	II - Subgrade	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Crushed Sto	•	0 48.1	TON	\$0.00	\$0.00	\$3.00	\$3.00	\$0.00	
SUBTOTAL		46.1	ION	\$0.00	\$0.00	\$5.00	\$5.00	\$240.74	
00010111								\$240.74	
	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL.	TOTAL	
Excavation of	•	0	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$0.00	
Loading of F	-	0	CY	\$0.39	\$1.91	\$0.00	\$2.30	\$0.00	
	10 mi round trip of ROC at pit	0 37	CY	\$1.66	\$5.10	\$0.00	\$6.76	\$0.00	
Loading of F		37 37	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$74.07	
_	C, 10 mi round trip	37	CY	\$0.39 \$1.66	\$1.91 \$5.40	\$0.00	\$2.30	\$85.19	-
_	roll subbase, small area	222	SY	\$0.43	\$5.10 \$0.63	\$0.00 \$0.00	\$6.76 \$1.06	\$250.37	
-	ppact ROC, 6" lifts	222	SY	\$0.43	\$0.59	\$0.00	\$0.90	\$235.56 \$200.00	
Geotechnica	•	1	EA	\$67.67	\$0.00	\$86.98	\$154.65	\$154.65	
SUBTOTAL				******		***************************************	Ψ101.00	\$999.84	
Area Cost Fa SUBTOTAL	actor (Local and Means)						69%	\$690 \$931	
Subcontracto	or Overhead						5%	\$46 E2	•
SUBTOTAL		•					370	\$46.53 \$977.16	
Subcontracto	or Profit						10%	\$97.72	
SUBTOTAL							1076	\$1,074.87	
DESCRIPTION	ON (Subcontractor)	QTY	UNIT	LABOR	EQUIP	BATTO	TOTAL	TOTAL	
	nsity (Means)	.1	EA	\$0.00	\$0.00	MTRL \$0.00	TOTAL \$26.68	TOTAL \$26.68	
Geotextile	, , , , , , , , , , , , , , , , , , , ,	222	SY	\$0.00	\$0.00	\$0.00	\$1.50	\$333.33	
SUBTOTAL				40.50	Ψυ.συ .	Ψ0.00	Ψ1.00	\$360.02	
SUBTOTAL	(Local, Means and Sub)							\$1,434.89	
Contractor O	verhead						5%	\$71.74	
SUBTOTAL							376	\$1,506.63	
Contractor P	rofit						10%	\$150.66	
TOTAL UNIT	COST/100 LF							\$1,657.30	
								•	
Source of C	ost Data: Soil material quotes from local borro	w source.		·					
Cost Adjust	ment Factor:								
	FACTOR:			NOTES:			-		
	H&S Productivity (labor & equip)			Level D					
	_								
	Escalation to Base Year			Escalation F	Factor of 1.0	00 for base y	ear of 2001,	cost information	2000
	Area Cost Factor	X		0.69 localiza	ation factor t	for 052 zin n	ode (Means)	,	
	Subcontractor Overhead & Prof.	=				•	, ,		
		X		Assuming n	nankup of 10	1% each for	both Overhe	ad and Profit.	
	Prime Contractor Overhead & Prof.	X		Assuming m	narkup of 10	% each for	both Overhe	ad and Profit.	

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Alternative 3	Sub-Element								
PERIMETER							COST	WORKS	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Stater	nent:					·	· · · · · · · · · · · · · · · · · · ·		
	Assuming completion time of 3 outside perimeter of Lagoons; 1' diameter.								
Cost Analys	is:								
Remove exis 7' Galvanized SUBTOTAL	DESCRIPTION sting d Chain-Link Fence	QTY 1.40 3000	UNIT 2000 LF LF	LABOR - \$1.31	EQUIP - \$0.00	MTRL - \$26.17	UNIT TOTAL \$40,000.00 \$27.48	TOTAL \$56,000.00 \$82,440.00 \$138,440.00	
: 									
Contractor O SUBTOTAL	verhead						5%	\$6,922.00 \$145,362.00	
Contractor P TOTAL UNIT							10%	\$14,536.20 \$159,898.20	
TOTAL OIVIT	0001							\$159,696.20	
					·				
Source of C	ost Data: Building Construction Cost Data Environmental Remediation Co				000				
Cost Adjusti	ment Factor:						-		
	FACTOR: H&S Productivity (labor & equip	» <u> </u>		NOTES: Level D				•	
	Escalation to Base Year						•	, cost information	2000
	Area Cost Factor	X					code (Means)	r	
	Subcontractor Overhead & Pro	لننيا			-		r both Overhe		
	Prime Contractor Overhead & F	orof. X		Assuming r	narkup of 1	u% each fo	r both Overhe	ad and Profit.	

COMMON C	OCT				-				
	Sub-Element						cos	Γ WORKSHEI	ΞΤ
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Stater	nent: In-place density at 1 Test/acre/6"	lift over 10	ft corresp	ponds to 20 li	fts for rough	nly 2 acres.			•
Cost Analys	is:								
DECCDIDE!	DM (Least)	-					UNIT		
DESCRIPTION Common Fill	to Elev. 508'	QTY 30,976	UNIT TON	LABOR \$0.00	EQUIP	MTRL	TOTAL	TOTAL	
	vv. 510' (1.5" crushed)	7,744	TON	\$0.00	\$0.00 \$0.00	\$3.00 \$5.50	\$3.00 .\$5.50	\$92,928.00 \$42,592.00 \$135,520.00	
DESCRIPTION	DN (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Excavation o	f Fill at pit	25,813	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$51,626.67	
Loading of Fi	•	25,813	CY	\$0.39	\$1.91	\$0.00	\$2.30	\$59,370.67	- 1
	10 mi round trip 8" layers, small dozer	25,813	CY	\$1.66	\$5.10	\$0.00	\$6.76	\$174,498.13	
	Fill, 6" to 12" lifts, vibrating roller	25,813 25,813	CY CY	\$0.30 \$0.40	\$0.76 \$1.15	\$0.00	\$1.06	\$27,362.13	
	, and a many manager of the	20,010	0.	ψυ.+υ	Ψ1.13	\$0.00	\$1.55	\$40,010.67	
SUBTOTAL								\$352,868.27	
Area Cost Fa SUBTOTAL (ctor (Local and Means)						69%	\$243,479 \$378,999	
Subcontracto SUBTOTAL	r Overhead						5%	\$18,949.96 \$397,949.06	
Subcontracto SUBTOTAL	r Profit						10%	\$39,794.91 \$437,743.97	
DESCRIPTIO In-Place Den	DN (Subcontractor) sity (Means)	QTY 40	UNIT EA	LABOR \$0.00	EQUIP \$0.00	MTRL \$0.00	TOTAL \$26.68	TOTAL \$1,067.29	
SUBTOTAL (Local, Means and Sub)							\$438,811.26	
Contractor On SUBTOTAL							5%	\$21,940.56 \$460,751.82	
Contractor Pr	ofit			•			10%	\$46,075.18	1
TOTAL UNIT	COST						٠	\$506,827.00	
Source of Co	est Data: Local costs obtained from borrow s Building Construction Cost Data, R	source on 2	/27/01. 58th Edit	ion 2000					
Cost Adjustn			50111 12011	1011, 2000					
	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)			Level D		-			- 1
	Escalation to Base Year			Escalation F	actor of 1.0	00 for base y	ear of 2001,	cost information 2000	- [
	Area Cost Factor	X					ode (Means		
	Subcontractor Overhead & Prof.	X		•					ŀ
4	Prime Contractor Overhead & Prof.							ad and Profit. ad and Profit.	
									- 1

Common Co	ests	-						· · · · · · · · · · · · · · · · · · ·
Capital Cost	Sub-Element							
DECONTAM	MNATION PAD - HEAVY EQUIPMENT	r (PER	EACH)				COS	ST WORKSHEET
Site:	Pownal Tannery Site							
Location: Phase:	Pownat, Vt Feasibility Study							
Base Year:								
Date:	Apr-01							
Work Stater								
Work States	ment: Pad size 25 x 65; thickness of 8 inch	ies.						
Cost Analys	ils:						UNIT	
DESCRIPTION	ON	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
Construction					-	· · · ·		,
Concrete pac		40	CY	\$78.00	\$0.98	\$116.00	\$194.98	\$7,823.27
Gravel base	- 6"	30	CY	\$1.52	\$1.62	\$18.43	\$21.57	\$649.10
Curb		180	LF CF	\$0.68	\$0.00	\$1.06	\$1.74	\$313.20
	construction, incl ex & gravel, pit avel collar, 12" pipe, corrugated, 16ga	75 180	CF LF	\$0.46 \$9.25	\$0.16 \$2.00	\$0.56	\$1.18	\$88.50
SUBTOTAL	vercular, 12 pipe, corrugated, 109a	100	ιr	\$8.25	\$2.90	\$11.90	\$23.05	\$4,149.00 \$13,023.07
002.0								\$10,020.0j
Area Cost Fa SUBTOTAL	actor						69%	\$8,986
Subcontracto	or Overhead						5%	\$1,100.45
SUBTOTAL								\$23,109.44
Subcontracto	or Profit						10%	\$2,310.94
SUBTOTAL							;	\$25,420.38
Contractor O	verhead						5%	\$1,271.02
SUBTOTAL Contractor P	t-afi						400/	\$26,691.40
Солнаског г	TOUL						10%	\$2,669.14
TOTAL UNIT	rcost							\$29,360.54
Operation: 4" Dia Contra	actor's Trash Pump, 300 GPM	1	DAY	\$10.41	\$0.00	\$59.19	\$69.60	\$69.60
Area Cost Fa SUBTOTAL	actor						69%	\$48 \$118
Subcontracto	or Overhead						5%	\$5.88
SUBTOTAL	DS4							\$123.51
Subcontracto	or Profit						10%	\$12.35
SUBTOTAL Contractor.O	hiorbaad						E0/	\$135.86 \$6.79
SUBTOTAL	venteau						5%	\$6.79 \$142.65
Contractor P	rofit				٠		10%	\$142.65 \$14.26
TOTAL UNIT	COST							\$156.91.
Source of Co	ost Data: Building Construction Cost Data, RS Environmental Remediation Cost Da				100			
Cost Adjusti	ment Factor:							
	FACTOR:			NOTES:				
	H&S Productivity (labor & equip)	-		Level D				
	_							
	Escalation to Base Year	النبا		Escalation i	Factor of 1.	.00 for base y	ear of 2001,	, cost information 2000
	Area Cost Factor	Х		0.69 localiz	ation factor	r for 052 zip c	ode (Means	s) .
	Subcontractor Overhead & Prof.	$\overline{\mathbf{x}}$				•	•	ead and Profit.
٠		==		-	•			
	Prime Contractor Overhead & Prof.	X		Assuming n	narkup of 1	0% each for t	oth Overhe	ead and Profit.

Common Co Capital Cost DECONTAM	sts Sub-Element IINATION PADS - PERSONNEL						COST	WORK	SHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent: Pad size 6 x 6; thickness of 4 inche			-		-			
İ	7 au Size 0 X 0, unchiless of 4 fricin	#5			•			-	
							•		
Cost Analys	is:								,
			-		• .				
DESCRIPTION Concrete - 4" Gravel base Curb SUBTOTAL	ON - 4"	QTY 0.44 0.44 24	UNIT CY CY LF	\$78.00 \$1.52 \$0.68	EQUIP \$0.98 \$1.62 \$0.00	MTRL \$116.00 \$18.43 \$1.06	UNIT TOTAL \$194.98 \$21.57 \$1.74	\$86.66 \$9.59 \$41.76 \$138.00	
Area Cost Fa SUBTOTAL	actor						69%	\$95 \$233	
Subcontracto SUBTOTAL Subcontracto SUBTOTAL Contractor O SUBTOTAL Contractor Pr	or Profit verhead						5% 10% 5% 10%	\$11.66 \$244.89 \$24.49 \$269.38 \$13.47 \$282.85 \$28.28	
TOTAL UNIT	COST							\$311.13	-
					·				
									ŀ
Source of Co	ost Data: Building Construction Cost Data, Rt Environmental Remediation Cost D	SMeans, ata, RS N	58th Edit Aeans, 6t	ion, 2000 h Edition, 200	00				
Cost Adjustn	nent Factor:								
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof.	X X		0.69 localiza	ilion factor i	for 052 zip	year of 2001,		ion 2000
	Prime Contractor Overhead & Prof.	X					both Overheat both Overheat		l

Common Cost Capital Cost								WO DIVO	
	TANDING WATER IN LAGOONS		·				COST	WORKS	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								_
Work Staten	nent:					-			
	One 300 GPM pump operating for 2	24hrs/day	. Pumpir	ng assumed l	o take 2 we	ek to compl	ete.		
0	· 								
Cost Analys	!S:								
					-		UNIT		
Trash pump i Hose, water,	ector's Trash Pump, 300 GPM	QTY 7 0.38 0.38 0.38 7	DAY MO MO MO MO DAY	\$10.41 \$0.00 \$0.00 \$0.00 \$500.00	EQUIP \$0.00 \$825.00 \$180.00 \$120.00	MTRL \$59.19 \$0.00 \$0.00 \$0.00 \$0.00	TOTAL \$69.60 \$825.00 \$180.00 \$120.00 \$500.00	TOTAL \$487.20 \$309.38 \$67.50 \$45.00 \$3,500.00 \$4,409.08	
Area Cost Fa SUBTOTAL	actor						69%	\$3,042 \$7,451	
Subcontractor SUBTOTAL Subcontractor SUBTOTAL Contractor O SUBTOTAL Contractor Pi	or Profit verhead						5% 10% 5% 10%	\$372.57 \$7,824 \$782 \$8,606.29 \$430.31 \$9,036.61 \$903.66	
Source of C	ost Data: Construction Cost Data, RS Means Environmental Remediation Cost D					om an ongoi	ing project.		
Cost Adjust	ment Factor:								
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X		0.69 localiz	ation factor narkup of 16	for 052 zip 0% each for	year of 2001, code (Means) both Overhe	ad and Profit.	2000

Capital Cost	st Sub-Element							
	EAT. OF STANDING WATER IN LAGO	ONS					COST	WORKSHEE
Site:	Pownal Tannery Site				·			
Location:	Pownał, Vt							
hase:	Feasibility Study							
Base Year:	2001							
Date:	Apr-01							•
Work Staten							· · · · · · · · · · · · · · · · · · ·	
·	Treat standing water in Lagoons 1, 2 a	and 5 for co	estarction	activities co	sete double	ned based or	the following	n·
	2,000 lbs carbon/100,000 gals; 20,000	nal/Frac ta	nsudction	ie 8 carbon u	accale (2 v	hen nasen ni	r ure ronownij	y. voceole
	holds 1,000 lbs of carbon and treats 5	o aim\ten 0	fflow Tre	eatment volu	me: 2.8/11 i	ngg age. one	ni unity, cach mina rate of '	sur aspers
	operating for 24 hrs. Time to complete	e = 1.5 wks	Dischar	ne treated wa	ater to 2 or	site infiltration	no saineilen (2)	305 gazmin N'v5'v5')
	lined with geotextile and backfilled with	n riprap. Es	stimate as	sumes no an	oundwater	recharge and	l gazenes (z. Lantv one	0 10 10 1
	dewatering event for duration of project	:t.				roonargo ana	unity one	
Cost Analys	is:							
							DAILE	
DESCRIPTIO	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL
	gmentation Tanks	0.25	MO	\$0.00	\$0.00		\$30,000.00	\$7,500.00
	rbon Equipment & Operation (8 Units)	1.00	WK	\$0.00	\$0.00		\$12,000.00	\$12,000.00 \$12,000.00
Dewatering E		0.25	MO	-	φυ. υ υ +	-12,000.00	\$1,000.00	\$250.00
Material Cost		30000	LB	\$0.00	\$0.00	\$0.65	\$0.65	\$19,500.00
Delivery		1	LS	-	•	-	\$10,000.00	
Disposal of C	Carbon	30000	LB	\$0.00	\$0.00	\$1.00	\$1.00	\$30,000.00
Seotextile		22	SY	-	-	-	\$1.50	\$33.33
								\$79,283.33
DÉSCRIPTIO	ON (Means)							
Analytical Te	•	12	EA	\$0.00	\$0.00	\$1,545.00	\$1,545.00	\$18,540.00
	Riprap, Light (10 to 100 lb)	37	CY	\$3.00	\$2.38	\$1,545.00 \$15.06	\$20.44	\$757.04
	. ,		÷.*		72.00	\$10.00	Ψ Ε Ψ.ΤΤ	\$19,297.04
Area Cost Fa	ctor						69%	\$13,315
SUBTOTAL ((Local & Means)				·			\$92,598.29
Subcontracto	or Overbead						50 .	
SUBTOTAL	. Oromedo						. 5%	\$4,629.91
Subcontracto	r Profit						100/	\$97,228
SUBTOTAL							10%	\$9,723
Contractor O	verhead						. 50 /	\$106,951.02. \$5.247.55
SUBTOTAL	·						5%	\$5,347.55 \$412.269.67
Contractor Pr	rofit						100/	\$112,298.57
							.10%	\$11,229.86
TOTAL UNIT	COST/WK						.	\$123,528
							•	
•								
Source of Co								
	Local costs from an ongoing project; G	eotextile es	timate fro	m locał vend	or.			•
	Construction Cost Data, RS Means, 58	th Edition, :	2000; Loc	al cost estima	ate from a	n ongoing pro	ject.	
	Environmental Remediation Cost Data	, RS Means	, 6th Editi	on, 2000				
ost Adjustn	nent Factor:			•				
	FACTOR:			NOTES:				
	H&S Productivity (labor & equip)	-		Level D				
	Escalation to Base Year			Escalation F	actor of 1.	00 for base y	ear of 2001, c	cost information 2000
	Area Cost Factor	Х		0.69 localiza	ation factor	for 052 zip c	ode (Means)	
	Subcontractor Overhead & Prof.	Х	•			0% each for t		d and Profit.
	Prime Contractor Overhead & Prof.	X		-	•	9% each for t		
				, washining II	idikup VI J	o /o GaGH IOH L	our overnea	u anu fium.

Alternative 3 Capital Cost : EXCAVATIO							cos	r workshe	ET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent: Excavation of bermed material found and below final cover.	i to contaîi	n waste.	Subsequently	y excavated	l materiał will	be placed w	ith footprint	
Cost Analysi	is:								
Truck bed co Stripping tops	fruck, 6 mit liner, disposable	QTY 30 300	UNIT EA SY	LABOR \$0.00 \$0.16 \$0.16	EQUIP \$0.00 \$0.00	MTRL \$28.50 \$1.53 \$0.00	UNIT TOTAL \$28.50 \$1.69	TOTAL \$855.00 \$507.00	
Excavation Loading onto Hauling to de		13,904 13,904 13,904 0	CY CY CY	\$0.34 \$0.34 \$0.63 \$0.34	\$1.66 \$1.66 \$1.55 \$1.66	\$0.00 \$0.00 \$2.18 \$0.00	\$2.00 \$2.00 \$4.36 \$2.00	\$27,808.18 \$27,808.18 \$60,621.83 \$0.00 \$117,600.18	
Area Cost Fa	octor			٠	-		69%	\$81,144	ŀ
Subcontracto SUBTOTAL Subcontracto SUBTOTAL Contractor O SUBTOTAL Contractor Pr	or Profit verhead						5% 10% 5% 10%	\$4,057.21 \$85,201 \$8,520.13 \$93,721 \$4,686.07 \$98,408 \$9,841 \$108,248.29	
Source of Co	ost Data: Building Construction Cost Data, RS Environmental Remediation Cost Da								
Cost Adjustr	ment Factor:								
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X		Escalation F 0.69 localiza Assuming m	Factor of 1.0 ation factor narkup of 10	for 052 zip co)% each for t	ear of 2001, ode (Means) ooth Overhea	cost information 2000 ad and Profit. ad and Profit.	

Alternative 3								n	
Capital Cost BACKFILL	Sub-Element						COS	T WORKSH	IEET
Site:	Pownal Tannery Site								
Location:	Pownal, Vt								
Phase:	Feasibility Study								
Base Year:	2001								- 1
Date:	Apr-01								i
Work Staten								•	
	Backfill berm between Lagoons 1 a River with clean material. Cover fa Assumed for costing that all of the	ce of berm, c	n river sic	le with riprap	<u>.</u>			e Hoosic	
Cost Analys	sis:								İ
_	•				•	-			[
							UNIT		ŀ
DESCRIPTION		QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
	vated Material with Common Filt Riprap, Heavy (25 to 500 lb)	11,587 22000	CY	\$0.86	\$1.98	\$5.06	\$7.90	\$91,535,25	1
SUBTOTAL	rupiap, neavy (23 to 500 to)	22,000	CY	\$3.00	\$2.38	\$16.57	\$21.95	\$482,878.00 \$574,413.25	1
Area Cost Fa	actor						69%	\$396,345	1
Subcontracto	or Overhead						5%	\$19,817.26	1
SUBTOTAL	Desfi						4000	\$416,162	1
Subcontracto SUBTOTAL	or Pior						10%	\$41,616.24	- 1
Contractor O	verhead						5%	\$457,779 \$22,888.93	
SUBTOTAL							570	\$480,668	1
Contractor Pr	rofit						10%	\$48,066.76	
TOTAL UNIT	COST							\$528,734.33	- 1
							•		- 1
									- 1
									1
									1
									1
									- 1
Source of Co	ost Datá:								ŀ
	Environmental Remediation Cost D	ata, RS Mea	ns, 6th Ed	lition, 2000					l
Cost Adjustr	ment Factor:								
•	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)			Level D					l
	Escalation to Base Year				Englar of 4 f	in for been	nor of 2004	eact information 2000	
						•	-	cost information 2000	į
	Area Cost Factor	X		0.69 localiza	ation factor	for 052 zip co	ode (Means)		į
	Subcontractor Overhead & Prof.	X		Assuming n	narkup of 10	0% each for t	oth Overhea	ad and Profit.	j
	Prime Contractor Overhead & Prof.	X		Assuming n	narkup of 10	0% each for t	ooth Overhea	ad and Profit.	

and the second second

Alternative 3 Capital Cost SAND LAYE							COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, VI Feasibility Study 2001 Apr-01				- · · · · · ·			
Work Staten	nent: Thickness of sand layer taken as 1: account for side slopes. Sand fon a					_		
Cost Analysi	is:							
DESCRIPTIO Common Sar		QTY 20,134	UNIT TON	LABOR \$0.00	EQUIP \$0.00	MTRL \$5.75	UNIT TOTAL \$5.75	TOTAL \$115,772.80
Spreading in	f Sand at pit and at pit d, 10 mi round trip 8" layers, small dozer Sand, 6" to 12" lifts, vibrating roller	QTY 13,423 13,423 13,423 13,423 13,423	UNIT CY CY CY CY CY	\$0.34 \$0.39 \$1.66 \$0.30 \$0.40	\$1.66 \$1.91 \$5.10 \$0.76 \$1.15	MTRL \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$2.00 \$2.30 \$6.76 \$1.06 \$1.55	TOTAL \$26,845.87 \$30,872.75 \$90,739.03 \$14,228.31 \$20,805.55 \$183,491.50
Area Cost Fa SUBTOTAL (actor (Local and Means)		,				69%	\$126,609 \$242,382
Subcontracto SUBTOTAL Subcontracto SUBTOTAL							5% 10%	\$12,119.10 \$254,501 \$25,450 \$279,951
DESCRIPTION OF THE PERSON OF T	ON (Means - Sub O&P included) sity	QТУ 13	UNIT EA	LABOR \$0.00	EQUIP \$0.00	MTRL \$0.00	TOTAL \$38.67	TOTAL \$502.71
Area Cost Fa SUBTOTAL	actor						69%	\$347 \$280,298.00
Prime Contra SUBTOTAL Prime Contra	actor Overhead 						5% 10%	\$14,014.90 \$294,660 \$29,465.98
TOTAL UNIT	PRICE							\$324,125.75
Source of Co	ost Data: Local costs from nearby borrow sor Building Construction Cost Data, R							
Cost Adjusti	ment Factor:							
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X		0.69 localiz	ation factor markup of 1	for 052 zip 0% each for	code (Means both Overh	, cost information 2000 s) ead and Profit. ead and Profit.

Alternative 3					-				
	Sub-Element ECTION LAYER						COS^{-}	r workshi	ССТ
GAJ COLLE	CHON EATER					-	- 003	MORNSHI	
Site:	Pownat Tannery Site .								
Location:	Pownal, Vt								
Phase:	Feasibility Study								
Base Year: Date:	2001 Apr-01			ē					
									
Work Staten	nent: Thickness of gas collection layer ta	kan ac 12	" avar an	annovimoto					
	account for side slopes. Sand ton	= 6.4 acres	overan 3.Ex1'x3.	approximate 1% increase :	area or 6.4 (1.5 TONS)	acres incre: CY = appro	ased by 30% × 20 000 too	to e	
	Gas venting wells costed by assum	ning 1 gas	vent/ACR	E at \$1,500/	ent based	on engineeri	ina iudaemer	s. et and	•
	experience.		-	•		J	3,3	••••	
Cost Analys	is:	,							
DESCRIPTIO	ON (I ocal)	QTY	UNIT	LABOR	FOUN	METON	UNIT	T0741	
Common Sar		20,134	TON	\$0.00	EQUIP \$0.00	MTRL \$5.75	TOTAL \$5.75	TOTAL \$115,772.80	
	• •	,,		ψ0.00	Ψ0.00	Ψ3.13	ψ5.75	9113,772.00	
DESCRIPTIO	•	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Excavation of Loading of Sa	·	13,423	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$26,845.87	
_	i, 10 mi round trip	13,423 13,423	CY	\$0.39 \$1.66	\$1.91 \$5.10	\$0.00 \$0.00	\$2.30 \$6.76	\$30,872.75	
-	8" layers, small dozer	13,423	CY	\$0.30	\$0.76	\$0.00	\$1.06	\$90,739.03 \$14,228.31	
Compaction :	Sand, 6" to 12" lifts, vibrating roller	13,423	CY	\$0.40	\$1.15	\$0.00	\$1.55	\$20,805.55	
Gas Venting		6	ACRE	•	-	-	\$1,500.00	\$9,600.00	
SUBTOTAL -	- Means							\$193,091.50	
Area Cost Fa	ector						69%	\$133,233	
SUBTOTAL (Local and Means)							\$249,006	
Subcontracto	r Overhead						5%	\$12,450.30	;
SUBTOTAL					• *			\$261,456	
Subcontracto SUBTOTAL	r Prolit						10%	\$26,146	
SUBTUTAL								\$287,602	
	N (Means - Sub O&P included)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
in-Place Dens	sity	13	EΑ	\$0.00	\$0.00	\$0.00	\$38.67	\$502.71	
Area Cost Fa	ctor						69%	\$9.4 7	
SUBTOTAL							09%	\$347 \$287,948.72	
								φ <u>ε</u> οι 10 10.12	
	ctor Overhead						5%	\$14,397.44	
SUBTOTAL Prime Contra	ctor Profit						4007	\$302,346	
Time Contra	Cion Front						10%	\$30,234.62	
FOTAL UNIT	PRICE							\$332,580.78	
· · · · · · · · · · · · · · · · · · ·	at Data								
Source of Co	Local costs from nearby borrow sou	rca obtain	ed on 2/2	7/04					
	Building Construction Cost Data, RS	S Means, 5	8th Editio	n, 2000		ì			
Cost Adjustn	nent Factor:								
	FACTOR:			NOTEO:					
	H&S Productivity (labor & equip)			NOTES: Level D					ļ
	Escalation to Base Year	=							
		<u></u>						cost information 2000	
	Area Cost Factor	×					ode (Means)		
	Subcontractor Overhead & Prof.	Х		Assuming m	arkup of 10	% each for	both Overhea	ad and Profit.	l
	Prime Contractor Overhead & Prof.	X		Assuming m	arkup of 10	% each for	both Overhea	ed and Profit.	ı

Alternative 3								<u>-</u>	
Capital Cost GEOSYNTH	Sub-Element ETICS						COST	WORKS	HEET
OEOOTIVII.				-					
Site:	Pownal Tannery Site								- 1
Location:	Pownał, Vt								
Phase:	Feasibility Study								
Base Year:									i
Date:	Apr-01								
Work Stater	ment: Cap consists (from base to top) a 12" sand layer followed by and topsoil. Top of landfill sloped 5%	other layer of g	eotextile.	, then a 26" l	ayer of Veg				
Cost Analys	sis:				· •		•		
			,				LINIT		
DESCRIPTION	ON ·	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL	
Geotextile		80,538	SY	LADOR		m i KL	\$1.50	\$120,806.28	. [
SUBTOTAL	- Local	00,550	31	_	_	_	Ψ1.50	\$120,806.28	
00010114	· Luvur							ψ120,000.20	
Prime Contra	actor Overhead						5%	\$6,040	
SUBTOTAL								\$126,847	
Prime Contra	actor Profit						10%	\$12,685	ŀ
TOTAL UNIT	COST							\$139,531	
									· .
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							•		1
									ł
								•	1
	•								
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									ı
									į.
					•				1
									Î
									ı
Source of C	ost Data:								
	Cost estimate from local vendor	on 3/20/01.						•	
									•
Cost Adjust	ment Factor:								
•	•								l
	FACTOR: H&S Productivity (labor & equip	,		NOTES: Level D				•	
		′			_				
	Escalation to Base Year	لللا		Escalation	Factor of 1.	00 for base	year of 2001	, cost information	2000
	Area Cost Factor			0.69 localiz	ation factor	for 052 zip	code (Means	5)	ļ
	Subcontractor Overhead & Prof.			Assuming r	markum of 1	0% each for	both Overh	ead and Profit.	ŀ
				-	•			_	ı
	Prime Contractor Overhead & P	rof. X		Assuming r	narkup of 1	u% each tor	both Overh	ead and Profit.	

Alternative 3								
	Sub-Element /E SUPPORT LAYER						COS	T WORKSHE
Site:	Pownal Tannery Site							
Location:	Pownal, Vt							
Phase:	•							
	Feasibility Study							
Base Year:	2001							•
Date:	Apr-01							
Work State	ment: 26" layer of vegetative support soil Layers to be placed in lifts of 6" an of cap for testing – 8.6 acres, 4 lifts	d in-place i	density te	sting comple	ted at a rate	of 1 test/ac	re/lift, Approx	dimate area
Cost Analys	sis:							
							\$ 1832 T	•
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL
Common Sa	· •	43,625	TON	\$0.00	\$0.00	\$5.75	\$5.75	TOTAL \$250,841.07
		,,,,,	, 0,,	4 0.50	₩0.00	ψ3.13	\$5.75	\$250,64 L.U7
DESCRIPTION	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
Excavation of	of Sand at pit	29,083	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$58,166.04
oading of S		29,083	CY	\$0.39	\$1.91	\$0.00	\$2.30	\$66,890.95
_	d, 10 mi round trip	29,083	CY	\$1.66	\$5.10	\$0.00	\$6.76	\$196,601.23
	8" layers, small dozer	29,083	CY	\$0.30	\$0.76	\$0.00	\$1.06	\$30,828.00
Compaction SUBTOTAL	Sand, 6" to 12" lifts, vibrating roller	29,083	CY	\$0.40	\$1.15	\$0.00	\$ 1.55	\$45,078.68 \$397,564.91
Vrog Coat Fr	o o har							
Area Cost Fa SUBTOTAL	(Local and Means)						69%	\$274,320 \$525,161
Subcontracto	or Overhead						5%	\$26.259.0 <i>4</i>
SUBTOTAL							376	\$26,258.04
Subcontracto	or Profit						10%	\$551,419 \$55,141.89
SUBTOTAL.							10,0	\$606,560.79
	ON (Means - Sub O&P included)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
n-Place Den	ısity	13	EA	\$0.00	\$0.00	\$0.00	\$38.67	\$502.71
Area Cost Fa	ector						69%	£247
SUBTOTAL							0970	\$347 \$606,907.66
rime Contra	actor Overhead					*	5%	\$30,345.38
UBTOTAL								\$637,253
rime Contra	actor Profit						10%	\$63,725.30
OTAL UNIT	PRICE							\$700,978.35
ource of C	ost Data:							
	Local costs from nearby borrow sou Building Construction Cost Data, R	orce obtain	ed on 2/2	7/01.				
	Building Construction Cost Data, 14	o Means, a	ORI EÓIR	iii, 2000		-		
ost Adjusti	ment Factor:							
	FACTOR;			NOTES:				
	H&S Productivity (labor & equip)			Level D				
	Escalation to Base Year			Ecoelation I	Englar of 4 C	M for book		
								cost information 2000
	Area Cost Factor	Х		0.69 localiza	ation factor (for 052 zip c	ode (Means)	
	Subcontractor Overhead & Prof.	Х		Assuming m	narkup of 10)% each for I	both Overhea	ad and Profit.
	Prime Contractor Overhead & Prof.	X			•			
	The Contractor Overhead a P101.			Assuming m	arkup of 10	r% each for l	ooth Overhea	ad and Profit.

~ '

Alternative 3 Capital Cost \$ TOPSOIL	Sub-Element						COST	WORKSH	EET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownat, Vt Feasibility Study 2001 Apr-01					,			
Work Statem	ent: 6" layer of topsoil over an арргохіт volumetric weight of topsoil = 1.5 Т					nt for side sk	opes. Assun	ning	
Cost Analysi	is:								
DESCRIPTIO Common Top		QTY 10,067	UNIT TON	LABOR \$0.00	EQUIP \$0.00	MTRL \$11.50	UNIT TOTAL \$11.50	TOTAL \$115,772.80	
Loading of To Hauling Tops	Topsoil at pit	QTY 6,711 6,711 6,711 6 30,976	UNIT CY CY CY ACRE SY	\$0.34 \$0.39 \$1.66 \$22.05 \$0.06	EQUIP \$1.66 \$1.91 \$5.10 \$40.14 \$0.15	MTRL \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$2.00 \$2.30 \$6.76 \$62.19 \$0.21	TOTAL \$13,422.93 \$15,436.37 \$45,369.51 \$398.02 \$6,504.96 \$81,131.80	
Area Cost Fa SUBTOTAL (ctor Local and Means)						69%	\$55,981 \$171,754	
Subcontracto SUBTOTAL Subcontractor SUBTOTAL Contractor On SUBTOTAL Contractor Pr	r Profit verhead ofit		·				5% 10% 5% 10%	\$8,587.69 \$180,341 \$18,034.14 \$198,376 \$9,918.78 \$208,294 \$20,829.43	
Source of Co					·				
	Local costs from nearby borrow so Building Construction Cost Data, R Environmental Remediation Cost D	S Means,	58th Editio	on, 2000	0				
Cost Adjustr	nent Factor:							÷	
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X		0.69 localiz Assuming r	ation factor narkup of 16	for 052 zip o 0% each for	ode (Means both Overhe	cost information 200) ad and Profit ad and Profit	00 .

Alternative 3 Capital Cost	Sub-Element				_				
	STRUCTURES				···		COS	T WORKSHE	EET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01				-		•		
Work State									
TEUIN WARES	Estimate of material required to b perimeter of cap footprint, width o geotextile. An allowance for two drainage outlet structures.	of 10° and	depth of 2	2', consisting	of 10 to 100	0 lb riprap ov	ver nonwover	n	
Cost Analys	sis:								
_	ON (Means) Riprap, Heavy (25 to 500 lb) Riprap, Light (10 to 100 lb)	QTY 70 2000	UNIT CY CY	LABOR \$3.00 \$3.00	EQUIP \$2.38 \$2.38	MTRL \$15.78 \$15.06	UNIT TOTAL \$21.16 \$20.44	TOTAL \$1,481.20 \$40,880.00 \$42,361.20	
Area Cost Fa	actor						69%	\$29,229	
SUBTOTAL Prime Contre SUBTOTAL DESCRIPTIO Geotextile	or Profit actor Overhead actor Profit DN (Local Contractor) actor Overhead actor Profit	QTY 9000	UNIT SY	LABOR	EQUIP	MTRL	5% 10% 5% 10% UNIT TOTAL \$1.50 5% 10%	\$1,461 \$30,691 \$3,069 \$33,760 \$1,687.99 \$35,447.75 \$3,544.77 \$38,992.52 TOTAL \$13,500.00 \$675.00 \$14,175.00 \$1,418 \$15,593	
Source of C									
	Environmental Remediation Cost Geotextile estimate from RTD for					markup for o	overhead and	i profit.	
Cost Adjusti	ment Factor:								÷
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof.			0.69 localiza	ation factor	for 052 zip c	code (Means)	cost information 2000) ad and Profit.	
	Prime Contractor Overhead & Pro	of. X		-	-			ad and Profit.	

Common costs Capital Cost Sub-Element **COST WORKSHEET** LAND USE RESTRICTIONS Site: Pownal Tannery Site -Location: Pownal, Vt Feasibility Study Phase: Base Year: 2001 Date: Apr-01 Work Statement: Zoning/Deed restrictions Cost Analysis: UNIT **EQUIP** TOTAL TOTAL DESCRIPTION QTY UNIT LABOR MTRL 120 HR \$150.00 \$0.00 \$0.00 \$150.00 \$18,000.00 Legal Preparation \$7,604.00 \$75.00 \$18.43 \$95.05 Engineering Support 80 HR \$1.62 Filing LS \$0.00 \$0.00 \$2,000.00 \$2,000.00 \$2,000.00 \$27,604.00 SUBTOTAL 5% \$1,380.20 Contractor Overhead SUBTOTAL \$28,984.20 \$2,898.42 10% Contractor Profit \$31,882.62 TOTAL UNIT COST Source of Cost Data: Engineering judgement

RAA-4

RAA-4: Material Excavated and Consolidated/Capped On-site.

ASSUMPTIONS:

- i. Discount rate for net present worth calculation of 7% per recommendation of EPA document 540-R-00-002, A Guide to Developing and Documenting Cost Estimates During the Feasibility Study.
- ii. Cost estimating sources:

Building Construction Cost Data, RS Means, 58th Edition, 2000 Environmental Remediation Cost Data, RS Means, 6th Edition, 2000 Local vendors, RI costs for Pownal Tannery, and ongoing projects

- iii. Abbreviations: CY = cubic yards; CF = cubic feet; SY = square yard; SF = square feet; LF = linear feet; LS = lump sum; EA = each; MWK = man weeks; MSF = thousand square feet; MO = month; WK = week; CYL = cylinder.
- iv. Future use of site for recreational purposes. A separate investigation and cost estimate will need to be prepared for future site development.
- v. For costing purposes, assumed that wetlands will be recreated at a 1:1 ratio.
- vi. A 1.5 conversion factor was used to convert from CY to TON for sediment/sludge cost calculations
- vii. RI determination of waste quantities adequate for implementation of RAA-4. No additional sampling required to further delineate extent of waste.

CAPITAL COST ITEMS:

Estimated Time to Complete Alternative:

- Mobilization/Demobilization:	4 wks
- Site Work	5 wks
- Excavation/Consolidation	11 wks
- Wetlands	3 wks
- Cover	10 wks
- Site Restoration	2 wks

8.75 Months

Note: Total project duration does not include seasonal impacts or delays.

1. Mobilization/Demobilization: Site construction activities will require office trailers and field office supplies, storage trailers, decontamination trailers, sanitary facilities, utilities

(phone and electrical, including connect/disconnect fees and monthly charges), and site lighting. Assumed installation of electrical poles will be necessary to bring power to the lagoon area (1 pole/150 LF). An allowance for pre-/post- construction submittals and implementation plans is included based on hourly rates for engineering and office support. See hourly breakdown included with applicable Common Cost Sub-Element Worksheets.

2. Site Work:

- General Equipment: Includes construction support equipment such as site vehicles, dumpsters, and water coolers for the site office trailers. A portable generator is included to support equipment located away from electrical receptacles where using an extension cord would be impractical.
- Continuous Air Monitoring: Assumed 1 laborer at \$55/hr will conduct continuous monitoring during 25% of site preparation and capping. See applicable Common Cost Sub-Element Worksheet for breakdown of monthly expense.
- Clearing/Grubbing: Will need to clear and grub site to facilitate movement of construction equipment. See applicable RAA-4 Capital Cost Worksheet for additional assumptions.
- Well Abandonment/Replacement: Assumed 7 wells in the lagoon area will need to be abandoned/reinstalled for cap construction and excavation of perimeter berm between Hoosic River and Lagoons 1 and 5. Cost estimate based on previous experience.
- Surveying: Assumed 2-man crew with GPS at \$135/hr onsite for 1 week during general site preparation and also for 21 weeks during excavation and capping activities at 3 days/week. The unit cost estimate was based on information from an ongoing project. The Subcontractor's cost includes hours for 1 supervisor at \$50/hr and has an additional mark up to include Contractor's O&P.
- Erosion-Dust Control: Assumed use of a water truck for dust suppression, the installation of silt fencing with hay bales along the access road bordering the Hoosic River (approximately 1,800 LF), and an allowance for construction of one sedimentation trap (50'x 25'x 6'). Exact location, size and grading requirements to be determined during design phase. See applicable Common Cost Sub-Element Worksheet for sedimentation basin material and quantity assumptions made for costing purposes.
- Access Roads-Perimeter: A temporary perimeter road around landfill cap will need to be installed to facilitate excavation/consolidation/capping activities (using 2,200 LF of road). See applicable Common Cost Sub-Element Worksheet for breakdown of unit cost/100 LF. Road cross-section consists of a layer of geotextile, and 0.5 feet of crushed stone.

- Access Roads-Lagoons: Road access, through Lagoons 1 and 5, is needed to facilitate excavation of contaminated material (using 500 LF). Road cross-section consists of 3' of subgrade fill, a layer of geotextile, and 0.5 feet of crushed stone.
- Perimeter Construction/Security Fence: Assumed the removal of existing fence and the installation of a 7-foot high fence around the entire perimeter of the Lagoon area. See applicable RAA-4 Capital Cost Sub-Element Worksheet for additional assumptions.
- Backfill Lagoon 2: Lagoon 2 will be backfilled to site grade elevation of 510' to create a staging area for site trailers, decontamination facilities and structures. The final two feet of backfill will be 1.5" crushed gravel. See applicable Common Cost Sub-Element Worksheet for additional assumptions.
- Decontamination Structure Heavy Equipment: Two, 8" thick, 25'x 65', concrete pads will be constructed in the staging area to remove sediment from equipment. Pad construction includes a 6" gravel base, a concrete curb and sump with 12" corrugated pipe around perimeter. Exact locations and size to be determined during design phase. See applicable Common Cost Sub-Element Worksheet for assumed quantities and material unit costs.
- Decontamination Structure Personnel: Two, 4" thick, 6' x 6', concrete pads will be constructed in the staging area. Pad construction includes a 4" gravel base with a concrete curb around the perimeter. Exact locations and size to be determined during design phase. See applicable Common Cost Sub-Element Worksheet for assumed quantities and material unit costs.
- Dewater Standing Water in Lagoons: Standing water volume estimate of approximately 2,841,000 gal in Lagoons 1, 2, 4 and 5. Requires the use of one 300 GPM pump operating 24 hrs/day for 1 week to remove initial volume. Assumes no immediate ground water recharge. During construction, figure standing water will need to be removed approximately once per month to account for slow ground water recharge and precipitation accumulation. Dewatering of standing water assumed to be above the water table. See applicable Common Cost Sub-Element Worksheet for quantities and unit costs.
- Collection & Treatment of Standing Water in Lagoons: Will treat standing water in lagoons using eight Carbon Adsorption units. Each unit consists of two vessels containing 1,000 lbs of carbon/vessel; 2,000 lbs of carbon assumed to treat 100,000 gallons. Fractionation tanks (20,000 gal/tank) will be needed to store untreated water. Discharge of treated water will occur onsite through two infiltration galleries assumed to be 20'x 5'x 5' and consisting of geotextile and riprap, exact location and size to be determined during design. Analytical testing will be conducted prior to initial discharge to ensure proper treatment.

- Continuous Cleanup: Cleanup of site during construction activities 1 laborer.
- Site Restoration: Estimate from previous project. Costs to remove concrete structures, repair access roads, and clean up debris.
- 3. Excavation of Waste Material, Backfill & Wetland Mitigation:
 - Excavation: Estimate includes excavating approximately 25,300 CY of saturated sludge from Lagoons 1 and 5, 8,700 CY of unsaturated sludge from Lagoon 1, 10,648 CY of cover soils from Lagoon 1 and 11,587 CY of berm material between Lagoons 1 and 5 and between Lagoons 1 and 5 and the Hoosic River, loading the material onto trucks and transporting the material to a dewatering pad (if saturated) or directly to the consolidation/capping area (if unsaturated). Cover soil from Lagoon 1 will be stockpiled for future use or disposal. Reuse of material not included in cost estimate. Assuming excavation rate of 60 CY/hr using two excavators. Quantity of removed material padded by 20%. Other costs include truck bed liners (2 liners/day) and covers (1 cover/day). Excavation assumed to be conducted without dewatering below the water table and under Level B conditions for 30% of excavated volume.
 - Confirmatory Soil Sampling: Needed to verify/confirm that desired concentration levels have been achieved through excavation. Analysis cost includes testing for Pest/PCBs, VOCs, SVOCs, Metals/CN and Dioxins.
 - *Technician − Soil Sampling*: Labor required to collect samples during excavation − 1 technician at \$55/hr. Includes contractor markup for overhead and profit.
 - Sludge Dewatering Structures: Construction costs for a 30' x 40' dewatering structure to store saturated, contaminated, material before treatment. Components for construction determined from EPA document 625/6-89/022; S/S of CERCLA and RCRA Wastes: Physical Tests, Chemical Testing Procedures, Technology Screening and Field Activities, Section 7.1.3. Untreated Waste Storage. Exact number and location of structures to be determined in design phase.
 - Level B Equipment/Operation/Shipping Allowance: Assuming a crew of 15 will need equipment and supplies for excavation of contaminated sludge.
 - Decontamination of Heavy Equipment: Includes decontamination of 10 pieces of equipment, once/day during initial site work, excavation and capping.
 - Operation of Trash Pump: Cost to operate a trash pump for decontamination over period of initial site work, excavation and capping. See Common Cost Sub-Element Worksheet for decontamination of heavy equipment.

- Backfill Excavated Material and 75% of Lagoon 1: Assuming all of the material excavated will be backfilled with clean material from a local borrow source. 75% of Lagoon 1 will be backfilled to grade (Figure 4.4-2).
- Wetland Mitigation: Assuming 1:1 replacement of 2.4 acres of wetlands with locations of recreated wetland areas to be determined at the design stage.

4. Consolidation of Waste Material:

- Collection & Treatment of Runoff from Dewatering Structures: Estimated time to complete excavation and initial installation of cap subgrade is assumed to be 16 wks. Analytical monitoring for compliance before direct discharge into onsite infiltration galleries.
- Backfill w/common fill Subgrade: Means unit cost that includes loading sand at pit, delivering to site, and dumping sand at location. Unit price includes localization factor and markups for subcontractor and contractor overhead and profit.
- Rough Grading of Subgrade: Means unit cost for grading with dozer. Unit price includes localization factor and markups for subcontractor and contractor overhead and profit.
- Compaction of Subgrade: Means unit cost that includes compacting subgrade using a roller, 6" lifts. Unit price includes localization factor and markups for subcontractor and contractor overhead and profit.
- Odor Suppression: Application of foam odor suppressant during excavation and capping of contaminated material. Costs for labor include 1 laborer at \$65/hr. Material costs include shipping.
- Spread/Compact Contaminated Material: Means unit cost that includes spreading dumped borrow and compacting with roller in 8" lifts. Unit price includes localization factor and markups for subcontractor and contractor overhead and profit.

5. Cover:

- Cap components (from base to top): 6" subgrade, 12" sand layer, geotextile, 24" low hydraulic conductivity clay layer, 12" gas collection layer, geotextile, 26" Vegetative Support layer and 6" of topsoil. Top of landfill sloped 5% to 7%; sideslopes maximum of 3:1. Area of cap = 4.0 acres.
- Sand Layer/Gas Collection Layer: Thickness of gas collection layer taken as 12" over an approximate area of 4 acres increased by 30% to account for side slopes. Sand ton = 4 acres x 1 ft x 30% increase x 1.5 CY/TON = approx. 12,600 tons. Gas

- venting wells costed by assuming 1 gas vent/ACRE at \$1,500/vent based on engineering judgment and experience.
- Geosynthetics: Two layers of geotextile installed over an area of 4 acres.
- Clay 10E-7, 6" lifts, off-site: Unit cost from Means. Includes installation of clay layer in 6" lifts, clay material from an offsite location
- Vegetative Support Layer (Sand): 26" layer of vegetative support soil over 4 acres. Area increased by 30% to account for side slopes. Layers to be placed in lifts of 6" and in-place density testing completed at a rate of 1 test/acre/lift. Approximate area of cap for testing ~ 4 acres, 4 lifts/acre. Sand ton = 4 acres x 1.3 x 2.2ft x 1.5 TONS/CY = approx 27,000 tons.
- *Topsoil*: 6" layer of topsoil over an approximate 4 acres. Area increased by 30% to account for side slopes. Topsoil ton = 1.5 TONS/CY x 4200 CY = approx. 5,100 tons.
- Geotechnical Testing of Soil Materials: Grain size analysis at a rate of 1 test/500 tons of material for gas collection layer, granular drainage layer and topsoil.
- Drainage Structures: Estimate of material required to build drainage structures for landfill cap assuming drainage swale around perimeter of cap footprint (approx. 2,400 LF) width of 10' and depth of 2', consisting of 10 to 100 lb riprap over nonwoven geotextile. An allowance for two heavy stone riprap areas of ~200 sf were assumed for construction of heavy drainage outlet structures.
- Erosion Control Blankets: Installation of blankets over cap area of 4.0 acres. Means unit price includes localization factor and markups for subcontractor and contractor overhead and profit.
- Seeding/Mulch/Fertilizer: Application over cap area of 6.4 acres. Means unit price includes localization factor and markups for subcontractor and contractor overhead and profit.
- Land Use Restriction: See hourly breakdown and rates included with applicable Common Cost Worksheets.

VERMONT SUE	BCHAPTER 6 FINAL COVER					COST ESTIMATE SUMMAR
Site: Po	ownal Tannery Site	Description:	Alternative 4	consists of excava	tion, consolidati	ion, and VT Solid Waste (Subchapter 6)
	ownal, Vt	-				osts occur in Year 0. Annual costs occur
	easibility Study		in Years 1-6.	Periodic costs oc	cur în every 5 yı	rs for 30 years.
Base Year: 20	ינונו pr-01					
Date: Ar	D-01					
0.00TAL COST	re.					
CAPITAL COST				UNIT		•
	DESCRIPTION	QTY	UNIT	COST	TOTAL	NOTES
Mobilization / De						
	onstruction Equipment	2	LS	\$2,017.69		Excavators, loaders, etc.
	ubmittals/implementation Plans	1	LS	\$100,985,69	\$100,986	
	emporary Facilities & Utilities	1	LS	\$77,210.78	\$77,211	
	eld Office Supplies	1	LS	\$14,519.33	\$14,519	
Po	ost-Construction Submittals	1	LS	\$29,481,95	\$29,482	Post-construction report
St	UBYOTAL			_	\$226,233	
Site Work	•					
G	eneral Equipment & Supplies	1	LS	\$44,801.27	\$44,801	
Co	ontinuous Air Monitoring	8.75	MO	\$5,120.17	\$44,802	
CI	learing/Grubbing	1	LS	\$20,474.62	\$20,475	i e
w	/ell Abandonment/Replacement	7	EA	\$5,775.00	\$40,425	•
Sı	urveying	66	DAY	\$1,709.40		2-man crew
	rosion/Dust Control Measures	1	LS	\$32,224.46	\$32,224	
	ccess Roads - Lagoons	5	100 LF	\$5,075.78	\$24,110	
A	ccess Roads - Perimeter	22	100 LF	\$1,657.30	\$36,461	
Pe	erimeter Fence	1	LS	\$137,680.62	\$137,681	
	ackfill Lagoon 2	1	LS	\$506,827.00	\$506,827	•
	econ. Structure - Heavy Equipment	2	LS	\$29,360.54	\$58,721	
	econ. Structure - Personnel	2	ĒΑ	\$311.13	\$622	
	ewater Standing Water in Lagoons	1.5	EA	\$9,940.27	\$14,910	
	ollect and Treat Standing Water	3	wĸ	\$123,528.43	\$370,585	
	econtamination of Frac. Tanks	20	EA	\$1,000.00	\$20,000	
	onlinuous Cleanup	28	MWK	\$819.22		Means including O&P and localization factor
	ite Restoration	1	LS	\$5,000.00	\$5,000	
	USTOTAL	•	LO	\$5,000.00	\$1,493,403	
	Vaste Material, Backfill and Wetland Mitigatio xcavation	n 1	ŁS	\$423,523.13	\$423,523	•
	onfirmatory.soil sampling	50				
			EA	\$1,100.00	\$55,000	
	echnician - soil sampling	1	LS	\$27,951.00	\$27,951	
	ludge Dewatering Structures	4	L\$	\$3,212.65	\$12,851	
	evel 8 Equipment	15	PER	\$5,600.30	\$84,005	
	evel B Operation	0.92	MO	\$13,349.08	\$12,224	
	evel B Shipping Allowance	1	L\$	\$5,000.00	\$5,000	
	econtamination of Heavy Equipment	1,300	EA	\$220.44		Means including O&P and localization factor
	peration of Trash Pump	130	DAY	\$156.91	\$20,399	
	ackfill Excavated Material	1	LS	\$476,677.20	\$476,677	
La	agoon Area Restoration/Stabilization	2.4	ACRE	\$46,200.00		Including O&P
		*.		_	\$1,515,076	
	f Waste Material					
	ollection & Treatment of Runoff from		- -	A		
	Dewatering Structures	1	LS	\$91,253.49	\$91,253	
	ackfill w common fill - subgrade	3,872	CY	\$21.01	\$81,332	
	ough Grading of Subgrade	19,360	SY	\$2.95	\$57,025	
	ompaction of Subgrade	174,240	SF	\$0.44	\$76,984	
	dor Suppression	1	LS	\$16,953.09	\$16,953	
	pread/Compact Contaminated Material	40,800	CY	\$1.15	\$46,869	Level B; Unit cost increased by 20%
SI	UBTOTAL.				\$370,417	
Cover				•		
	and Layer	1	LS	\$202,336.27	\$202,336	
	as Collection Layer	1	LS	\$207,859.13	\$207,859	
G	eosynthetics	1	LS	\$87,206.25	\$87,206	
CI	lay 10E-7, 6" lifts, Off-site	16,779	CY	\$15.99		Localized with O&P included
	ranular Drainage Layer (sand)	1	LS	\$438,415.80	\$438,416	
	opsoil	1	LS	\$143,202.36	\$143,202	
	eotechnical Testing of Soil Materials	92	EA	\$142.36		Soil Tests/500 tons of material; Grain Size
	rainage Structures	1	LS	\$43,804.35	\$43,804	
	rosion Control Blankets	25,168	SY	\$1.12	\$28,263	
	eeding/Mulch/Fertilizer	25,168 25,168	SY	\$1.12 \$1.37	\$26,263 \$34,518	
	UBTOTAL	20,100	31	\$1.01 E		-
					\$1,467,012	

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Alternative 4 VERMONT S	SUBCHAPTER 6 FINAL COVER					COST ESTIMATE SUMMARY
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01	Description:	finał cover w		tions. Capital co	ion, and VT Solid Waste (Subchapter 6) osts occur in Year 0. Annual costs occur rs for 30 years.
SUBTOTAL					\$5,072,142	•
	Contingency (10% scope + 15% bid)	25%			\$1,268,035.38	•
SUBTOTAL				_	\$6,340,177	_
000.0						
	Project Management Remedial Design	5% 8%			\$317,008.85 \$507,214.15	
	Construction Management	6%			\$380,410.61	
	Institutional Controls	-				Land use restrictions
TOTAL CAP	ITAL COST:	,		Г	\$7,576,693	1
				<u>_</u>	47,070,000	
ANNUAL O8	M COSTS (Year 1):			UNIT		
	DESCRIPTION	QTY	UNIT	COST	TOTAL	NOTES
Site Monitorin	•					
	Cap Inspections	2	EA	\$3,000.00	\$6,000	
	Mowings (2/year) Groundwater Sampling - Equipment and Labor	227 4	MSF EA	\$2.84		Lawn, riding mower, 48" - 58"; Including markups
•	Groundwater Analysis - VOCs, SVOCs, Metals	6 0	EΑ	\$32,771.92 \$2,000.00	\$131,088	12 locations, quarterly, inc 3 QA/QC Samples
	Groundwater Analysis - Dioxins (Semiannully)	14	EA	\$750.00		12 locations, 2 QA/QC Samples
	Sediment Sampling - Equipment and Labor	1	ĒΑ	\$6,364.10	\$6,364	
	Sediment Analysis - VOCs, SVOCs, Metals	7	EA	\$1,100.00		4 locations, annualty, inc 3 QA/QC Samples
	Sediment Analysis - Dioxins SUBTOTAL	5	EA	\$800.00	\$4,000 \$286,592	
Professional/	Technical Support					
	O&M Technical Report			15%	\$42,989	
SUBTOTAL	O&M Oversite			5%	\$14,330 \$343,911	•
Contingency				10%	\$34,391	
	TOTAL ANNUAL O&M COST (Year 1)				\$378,302	,]
ANNUAL OR	M COSTS (Years 2-3):					
ANTOAL OU				UNIT		
Site Monitorin	DESCRIPTION og	QTY	UNIT	COST	TOTAL	NOTES
	Cap Inspections	1	EA	\$3,000,00	\$3,000	
	Mowings (2/year)	227	MSF ·	\$2.84		Lawn, riding mower, 48" - 58"
	Groundwater Sampling - Equipment and Labor Groundwater Analysis - VOCs, SVOCs, Metals	2 30	£Α	\$32,771.92	\$65,544	
	Groundwater Analysis - Dioxins	14	€A EA	\$2,000.00 \$750.00		. 12 locations, semi; inc 3 QA/QC Samples - Semiannual, inc 2 QA/QC Samples
	Sediment Sampling - Equipment and Labor	1	EA	\$6,364.10	\$6,364	
	Sediment Analysis - VOCs, SVOCs, Metals	7	ĒA	\$1,100,00		4 locations, annually, inc 3 QA/QC Samples
	Sediment Analysis Dioxins SUBTOTAL	5	EA	\$800.00	\$4,000 \$158,048	
Professional/	Fechnical Support					
	O&M Technical Report			15%	\$23,707	
SUBTOTAL	O&M Oversite			5%	\$7,902 \$189,658	
Contingency				10%	\$18,966	
SUBTOTAL				***	410,400	
	TOTAL AMMINAL ORM COOK OF THE			-		•
	TOTAL ANNUAL O&M COST (Years 2-3)			L	\$208,624	

.

A Comment

See ...

Piter	SUBCHAPTER 6 FINAL COVER						COST ESTIMATE SUMMA
Site: Location: Phase: Base Year:	Pownał Tannery Site Pownal, Vt Feasibility Study		•	final cover with		ions. ,Capital co	on, and VT Solid Waste (Subchapter 6) sts occur in Year 0. Annual costs occur s for 30 years.
Date:	Apr-01						
ANNUAL O	BM COSTS (Years 4-6):						•
			•		UNIT		
	DESCRIPTION		QTY	UNIT	COST	TOTAL	NOTES
Site Monitori					** *** ***	An aga	
	Cap Inspections		1	EA	\$3,000.00	\$3,000	111: 40° 50°
	Mowings (2/year)		227	MSF	\$2.84		Lawn, riding mower, 48" - 58"
	Groundwater Sampling - Equipme		1	EA	\$32,771.92 \$2,000.00	\$32,772	12 locations, annual; inc 3 QA/QC Samples
	Groundwater Analysis - VOCs, S Groundwater Analysis - Dioxins	VUCS, Metais	15 14	EA EA	\$750.00		Annual; 2 QA/QC Sample
	Sediment Sampling - Equipment	and Labor	1	EA	\$6,364.10	\$6,364	Annual, 2 de vao compie
	Sediment Analysis - VOCs, SVO		7	EA	\$1,100.00		4 locations, annually; inc 3 QA/QC Samples
	Sediment Analysis - Vocs, 3VO	us, Metais	5	EA	\$800.00	\$4,000	Tiocasons, annually, nic o arraco cumples
	SUBTOTAL		ŭ			\$95,277	
Professional	/Technical Support				4507	B44 00+	
	O&M Technical Report				15%	\$14,291 \$4,764	
ALINEAT!	O&M Oversite				5% _	\$4,764	
SUBTOTAL						\$114,332	
Contingency	1				10%	\$11,433	
SUBTOTAL							
	TOTAL ANNUAL O&M COST ()	(ears 4-6)			. [\$125,765	
nemionic.	oore.		<u></u>				
PERIODIC (COS15:						
					UNIT		
DESCRIPTI	ION	YR	QTY	UNIT	COST	TOTAL	NOTES
	Perimeter Fence Repairs	5	1	EΑ	\$6,884.03	525 341	5% of installation cost
	Cap, Erosion, Seeding Repairs	5	1	ĒĀ	\$36,675.30		2.5% of cap installation
	Five Year Report	5	1	EA.	\$12,000.00	\$12,000	
	Update Institutional Controls	5	1	EA	\$3,000.00	\$3,000	
			•		_	\$77,017	
					******	005 0 44	FOC of in shallow month
	Perimeter Fence Repairs	10-30	1	EA	\$6,884.03		5% of installation cost
İ	Cap, Erosion, Seeding Repairs.	10-30	1	EA	\$22,005.18		1.5% of cap installation
ŀ	Five Year Report	10-30	1	EA EA	\$12,000.00	\$12,000	
	Update Institutional Controls	10-30	1	EA	\$3,000.00_	\$3,000	•
						\$62,347	
							•
							•
DDECCNT.	VALUE ANALYSIS						
PRESENT \	VALUE ANALYSIS:		TOTAL	TOTAL	DISCOUNT	PRESENT	
	COST TYPE	YEAR	COST	COST/YR	FACTOR	VALUE	NOTES
	Capital Cost	0	\$7,576,693		-	-	See support sheet for discount factors an
	Annual O&M Cost	1	\$378,302		-	-	Present Value calculation
	Annual O&M Cost	2-3	\$417,248		-	-	
	Annual O&M Cost	4-6	\$377,295		-		
	Periodic Cost	5 ·	\$77,017		-	-	
	Periodic Cost	10	\$62,347		-	-	
	Periodic Cost	15	\$62,347		-	-	Remedial Action Report
	Periodic Cost	20	\$62,347		-	-	
	Periodic Cost	25	\$62,347		-	-	
		25 30	\$62,347 \$62,347	•	-	-	
	Periodic Cost	30		•		\$8,697,039	1

Alternative 4 VERMONT SUBCHAPTER 6 FINAL COVER

PRESENT VALUE ANALYSIS

Site: Location: Phase:

Pownal Tannery Site

Pownal, Vt Feasibility Study

Description:

Alternative 4 consists of excavation, consolidation, and VT Solid Waste (Subchapter 6) final cover with land use restrictions. Capital costs occur in Year 0. Annual costs occur in Years 1-6. Periodic costs occur in every 5 yrs for 30 years.

Base Year: 2001 Date: Apr-01

	Year	Capital Costs (\$)	- Annual O&M Costs (\$)	Periodic Costs (\$)	Total Costs (\$)	Discount Factor at 7%	Total Present Value Cost at 7% (\$)	
	0	\$7,576,693	\$0		\$7,576,693	1.000	\$7,576,693	
}	1		\$378,302		\$378,302	0.935	\$353,712	
	2		\$208,624		\$208,624	0.873	\$182,129	
į	3		\$208,624		\$208,624	0.816	\$170,237	
į	4		\$125,765		\$125,765	0.763	\$95,959	•
	5		\$125,765	\$77,017	\$202,782	0.713	\$144,583	
	6		\$125,765		\$125,765	0.666	\$83,759	
•	7				\$0	0.623	\$0	
	8				\$0	0.582	\$0	
	9				\$0	0.544	\$0	
	10			\$62,347	\$62,347	0.508	\$31,672	
	11				\$0	0.475	\$0	
	12				\$0	0.444	\$0	
	13				\$0	0.415	\$0	
	14				\$0	0.388	\$0	
	15			\$62,347	\$62,347	0.362	\$22,569	
	16				\$0	0.339	\$0	
	17				\$0	0.317	\$0	•
	18				\$0	0.296	` \$0	
	19				\$0	0.277	\$0	
	20	•		\$62,347	\$62,347	0.258	\$16,085	
	21				\$0	0.242	\$0	
	22			•	\$0	0.226	\$0	
	23				\$0	0.211	\$0	
	24				\$0	0.197	\$0	
	25			\$62,347	\$62,347	0.184	\$11,472	
	26				\$0	0.172	\$0	
	27				\$0	0.161	\$0	
	28				\$0	0.150	\$0	
	29				\$0	0.141	\$0	
	30			\$62,347	\$62,347	0.131	\$8,167	

TOTAL PRESENT VALUE OF ALTERNATIVE

\$8,697,039

Alternative 4	Sub-Element								
	TION EQUIPMENT						COST	WORKSI	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent: Mobilization and demobilization	costs for la	rge equip	ment.					
Cost Analys	is:								
DESCRIPTION Backhoe/FE Dump Truck Excavator Loader Roller		QTY 1 3 2 1	UNIT EA EA EA EA	LABOR	EQUIP \$274 \$274 \$274 \$274 \$274	MTRL - - - - -	UNIT TOTAL \$274 \$274 \$274 \$274 \$274	TOTAL \$274.00 \$822.00 \$548.00 \$274.00 \$274.00	
Area Cost Fa	actor						69%	\$1,512.48	
Subcontractor SUBTOTAL Subcontractor SUBTOTAL Contractor O SUBTOTAL Contractor P	or Profit Iverhead rofit						5% 10% 5% 10%	\$75.62 \$1,588.10 \$158.81 \$1,746.91 \$87.35 \$1,834.26 \$183.43 \$2,017.69	
Source of C	ost Data: Building Construction Cost Data	a, RS Means	s, 58th Ed	lition, 2000					
Cost Adjusti	ment Factor:								
	FACTOR: H&S Productivity (labor & equip Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof Prime Contractor Overhead & P	X		0.69 localiz	Factor of 1. ation factor narkup of 1	for 052 zip 0% each fo	code (Mean or both Overt	1, cost informations) s) lead and Profit. lead and Profit.	n 2000

Common costs Capital Cost Sub-Element SUBMITTALS & IMPLEMENTATION PLANS

COST WORKSHEET

Site:

Pownal Tannery Site

Location: Phase:

Pownal, Vt Feasibility Study

Base Year:

Date:

2001 Apr-01

Work Statement:

Preconstruction submittals are assumed to include health and safety plan, construction QA/QC plan and spill prevention plan.

Cost Analysis:

					-	UNIT	
DESCRIPTION	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
Engineering							
Permitting	320	HR	\$75.00	\$0.00	\$0.00	\$75.00	\$24,000.00
Design	480	HR	\$75.00	\$0.00	\$0.00	\$75.00	\$36,000.00
Meetings	100	HR	\$75.00	\$0.00	\$0.00	\$75.00	\$7,500.00
Office Support					-	•	* - ,
Support staff	80	HR	\$40.00	\$0.00	\$0.00	\$40.00	\$3,200.00
Office Expenses	1	LS	\$0.00	\$0.00	\$5,000.00	\$5,000.00	\$5,000.00
SUBTOTAL							\$75,700.00
Subcontractor Overhead						5%	\$3,785.00
SUBTOTAL						• • • • • • • • • • • • • • • • • • • •	\$79,485.00
Subcontractor Profit						10%	\$7,948.50
SUBTOTAL						. 0,5	\$87,433.50
Contractor Overhead						5%	\$4,371.68
SUBTOTAL						5,0	\$91,805,18
Contractor Profit						10%	\$9,180.52
TOTAL UNIT COST						10%	\$9,180

Source of Cost Data:

Engineering judgement

Alternative 4	Cub Flores					/			
Capital Cost TEMPORAR	SUD-Element Y FACILITIES AND UTILITIES						COST	WORKS	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent:								
WOIK State	Assuming onsite construction time of duration of site work.	35.2 we	eks at 4	weeks/month	. Mobilize/	Rent suppor	t facilities for	estimated	
Cost Analys	is:								
Temporary S Temporary F Portable Toil Mob/Demob Temporary C Install power Utility connec Utilities (phot SUBTOTAL Area Cost Fa SUBTOTAL Subcontractor SUBTOTAL Subcontractor SUBTOTAL Contractor O	Temporary Storage Trailer (2 units) torage Trailer (2 units) encing ets - Chemical (3 units) Temporary Office with steps (2 Units) ffice with steps (2 Units) poles (2) citon/disconnection e and electric) - Local ON (Means) etion Trailer (Local and Means) or Overhead	QTY 2 18 2,100 26 2 18 2 2 9 9 QTY 9	UNIT EA MO LF MO EA MO EA MO UNIT MO	LABOR \$0 \$0 \$D LABOR	EQUIP \$0 \$0 \$0	MTRL	UNIT TOTAL \$340 \$150 \$6.90 \$75 \$430 \$2,847 \$2,000 \$500 TOTAL \$2,275 69%	TOTAL \$680 \$2,625 \$14,490 \$1,969 \$860 \$9,450 \$5,694 \$4,000 \$4,375 \$44,143 TOTAL \$19,906 \$13,735.31 \$57,878 \$2,893.90 \$60,771.97 \$6,077.20 \$66,849.16 \$3,342	
SUBTOTAL Contractor P	rofit						10%	\$70,192 \$7,019.16	-
TOTAL UNIT	COST							\$77,211	
					<i>:</i>				
Source of Co	ost Data: Environmental Remediation Cost Dat Local unit costs from on ongoing proj		eans, 6th	edition, 200	0			·	·
Cost Adjusti	nent Factor:						•	. 1, 1	
	FACTOR: H&S Productivity (labor & equip)			NOTES: Not Applica		00 for home		-act information	2000
	Escalation to Base Year Area Cost Factor							, cost information : v	2000
		X				•	code (Means	•	ļ
	Subcontractor Overhead & Prof.	L¥1		-	•			ad and Profit.	
	Prime Contractor Overhead & Prof.	X		Assuming i	пагкир от 1	u% each for	DOWN OVERHE	ad and Profit.	

Common Costs
Capital Cost Sub-Element
FIELD OFFICE SUPPLIES

COST WORKSHEET

Site:

Pownal Tannery Site

Location:

Pownal, Vt Phase: Feasibility Study Base Year: 2001

Date: Apr-01

Work Statement:

Purchase miscellaneous field office supplies.

Cost Analysis:

DESCRIPTION	QTY	UNIT	LABOR	EQUIP	AATOL	UNIT TOTAL	TOTAL	
Office Supplies	WIT	UNII	LABOR	EQUIP	MTRL	IOIAL	TOTAL	
Cordless phone with answering machine	2	EA	\$0.00	\$0.00	\$90.00	\$90.00	\$180.00	
Computer	2	MO	\$0.00	\$0.00	\$480.00	\$480.00	\$960.00	\$40/MO for 6Mo
Surge Protectors	2	EA	\$0.00	\$0.00	\$28.49	\$28.49	\$56.98	THO IOI ONIO
Floppy disks	2	PACK	\$0.00	\$0.00	\$9.99	\$9.99	\$19.98	40/PACK
Printer/fax/copier	1	EA	\$0.00	\$0.00	\$199.97	\$199.97	\$199.97	4011 NOIN
HP Printer toner	20	EA	\$0.00	\$0.00	\$29.99	\$29.99	\$599.80	
Standard Task Chair	5	EA	\$0.00	\$0.00	\$119.75	\$119.75	\$598.75	
Standard Folding Chair	5	CARTON	\$0.00	\$0.00	\$77.35	\$77.35	\$386,75	5/CARTON
Shelving	2	EA	\$0.00	\$0.00	\$317.50	\$317.50	\$635.00	H74xW36xD21
Folding Tables - Heritage Series	2	EA	\$0.00	\$0.00	\$102.15	\$102.15	\$204.30	H29xW30xL96
Pens	10	PACK	\$0.00	\$0.00	\$3.89	\$3.89	\$38.90	60/PACK
Paper	20	CASE	\$0.00	\$0.00	\$20.99	\$20.99	\$419.80	5000/CASE
Pencils	10	PACK	\$0.00	\$0.00	\$3,19	\$3.19	\$31.90	48/PACK
Highlighters	5	PACK	\$0.00	\$0.00	\$4.35	\$4.35	\$21.75	43/PACK
Notepads	10	. EA	\$0.00	\$0.00	\$4.35	\$4.35	\$43.50	TON AON
Sharpies (thick)	25	EA	\$0.00	\$0.00	\$1.52	\$1.52	\$38.00	
Sharpies (Thin)	50	EA	\$0.00	\$0.00	\$0.79	\$0.79	\$39.50	
Stapler	4	EA	\$0.00	\$0.00	\$0.79 \$9.99	\$9.99	\$39.96	
Staples	2	BOX	\$0.00	\$0.00	\$2.99	\$2.99	\$5.98	1000/BOX
Staple remover	4	EA	\$0.00	\$0.00	\$0.69	\$0.69	\$2.76	NOODOX
Scotch Tape	5	EA	\$0.00	\$0.00	\$1.22	\$1.22	\$6.10	
Paper clips	5	PACK	\$0.00	\$0.00	\$1.22 \$1.69	\$1.22 \$1.69	\$8.45	1000/PACK
Binder clips	5	PACK	\$0.00				\$17.75	60/PACK
Masking tape	5	PACK		\$0.00	\$3.55	\$3.55 \$5.29	\$17.75 \$26.45	4/PACK
Hanging folders	5	BOX	\$0.00 \$0.00	\$0.00 \$0.00	\$5.29 \$3.99	\$3.29 \$3.99	\$20.45 \$19.95	25/BOX
Manila folders	2	BOX	\$0.00	\$0.00	\$3.99 \$4.19	\$3.99 \$4.19	\$8.38	100/BOX
Scissors .	4						\$65.00	2/PACK
Engineer's scale	5	PACK EA	\$0.00	\$0.00 \$0.00	\$16.25 \$3.65	\$16.25	\$65.00 \$18.25	ZIFACK
Tacks	5 5	PACK	\$0.00 \$0.00	\$0.00 \$0.00		\$3.65	\$10.25 \$1.25	100/PACK
Post-it-notes (4"X6")	5 5	PACK	\$0.00		\$0.25	\$0.25	\$1.25 \$34.95	6/PACK
Post-it-notes (3"X4")	5 5			\$0.00	\$6.99	\$6.99	•	12/PACK
• •		PACK	\$0.00	\$0.00	\$10.99	\$10.99	\$54.95	
Post-it-notes (1.5"X2")	5	PACK	\$0.00	\$0.00	\$ 4.19	\$4.19	\$20.95	12/PACK
Mag-Lite Flashlight	5	EA	\$0.00	\$0.00	\$24.95	\$24.95	\$124.75	L=8.5"
Batteries (AA)	10	PAÇK	\$0.00	\$0.00	\$6.15	\$6.15	\$61.50	8/PACK
Batteries (AAA)	5	PACK	\$0.00	\$0.00	\$8.49	\$8.49	\$42.45	12/PACK
Batteries (C)	5	PACK	\$0.00	\$0.00	\$9.99	\$9.99	\$49.95	8/PACK
Soft Wastbaskets	4	EΑ	\$0.00	\$0.00	\$8.20	\$8.20	\$32.80	H19xW15xD11
55-gal Waste Containers	5	EΑ	\$0.00	\$0.00	\$62.95	\$62.95	\$314.75	
Paper towels	50	PACK	\$0.00	\$0.00	\$15.75	\$ 15.75	\$787.50	15/PACK
Trash bags	50	PACK	\$0.00	\$0.00	\$8.49	\$8.49	\$424.50	50/PACK
Broom	1	£Α	\$0.00	\$0.00	\$9.19	\$9.19	\$9.19	
Dust pan	1	EA	\$0.00	\$0.00	\$5.15	\$5.15	\$5.15	
Disinfectant Cleaner	5	EA	\$0.00	\$0.00	\$6.59	\$6.59	\$32.95	
First Aid Kit	1	EA	\$0.00	\$0.00	\$26.10	\$26.10	\$26.10	
Emergency Eye Wash Station	1	EA	\$0.00		\$20.10		\$24.15	
			-	\$0.00	•	\$24.15	*	
Extension cord (50°)	3	EA	\$0.00	\$0.00	\$19.90	\$19.90	\$59.70	
Locks (2")	10	EA	\$0.00	\$0.00	\$11.55	\$11.55	\$115.50	
Locks (3/4")	10	£Α	\$0.00	\$0.00	\$8.25	\$8.25	\$82.50	
Shipping Allowance	1	LS	-	-	-	\$5,000.00	\$5,000.00	_
SUBTOTAL							\$11,999.45	

Common Co					
	Sub-Element CE SUPPLIES			CO	ST WORKSHEET
PIELD OF TH	CE SUFFLIES	•			01 110111011221
Site:	Pownal Tannery Site				· ·
Location:	Pownal, Vt				
Phase:	Feasibility Study				
Base Year: Date:	2001 Apr-01				
Date.	Αμισοί				
Subcontracto	or Profit			10%	\$1,200
SUBTOTAL		•			\$13,19 9
Prime Contra	actor Profit			10%	\$1,319.94
TOTAL UNIT	r cost				\$14,519
Source of C					
•	Equipment and supplies from local v	endors.			
l					
Cost Adjust	ment Factor:		•		
	FACTOR:		NOTES:		
	H&S Productivity (labor & equip)		No labor involved, material costs		
	Escalation to Base Year		2001 material costs		
÷	Area Cost Factor		No area cost factor applied; Not applic	able	
	Subcontractor Profit	Х	Assuming markup of 10%		•
	Prime Contractor Profit	X	Assuming markup of 10%		
ļ					

Common costs Capital Cost Sub-Element **COST WORKSHEET** POST-CONSTRUCTION SUBMITTALS Site: Pownal Tannery Site Location: Pownal, VI Phase: Feasibility Study Base Year: 2001 Date: Apr-01 Work Statement: Cost Analysis: UNIT LABOR DESCRIPTION QTY UNIT EQUIP MTRL TOTAL TOTAL Engineering 240 HR \$75.00 \$0.00 \$0.00 \$75.00 \$18,000.00 Office Support Support staff 40 HR \$40.00 \$0.00 \$0.00 \$40.00 \$1,600.00 Office Expenses LS \$0.00 \$2,500.00 \$2,500.00 \$0.00 \$2,500.00 SUBTOTAL \$22,100.00 Subcontractor Overhead 5% \$1,105.00 SUBTOTAL \$23,205.00 Subcontractor Profit 10% \$2,320.50 SUBTOTAL \$25,525.50 \$1,276.28 Contractor Overhead 5% SUBTOTAL \$26,801.78 Contractor Profit 10% \$2,680.18

\$29,481.95

Source of Cost Data:

TOTAL UNIT COST

Engineering judgement

Alternative 4 Capital Cost									
	RAL EQUIPMENT & SUPPLIES		_		-		COS	T WORKS	SHEET
Site:	Pownal Tannery Site								
Location:	Pownal, Vt								
Phase:	Feasibility Study								
Base Year: Date:	2001 Apr-01								
Work Staten	nent: Purchase/rental of general equ	ipment and :	supplies.						
Cost Analys	is:								
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL	-
Construction	•	4	EA	\$0.00	\$0.00	\$82.80	\$82.80	\$331.20	
	ve Dumpsters	2	EΑ	-	-	-	\$100.00	\$200.00	
Dumpsters (2	2 Units)	18	MO	_	-	•	\$30.00	\$525.00	
Install/Remo	ve Water Coolers	2	EA	-	-	-	\$100.00	\$200.00	
Water Coole	r (2 Units)	18	MO	-	-	•	\$125.00	\$2,187.50	
SUBTOTAL								\$3,443.70	
DESCRIPTION	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	•
SUV Rental		9	MO	\$0.00	\$0.00	\$720.00	\$720.00	\$6,300.00	
Pickup Truck		9	МО	\$0.00	\$0.00	\$720.00	\$720.00	\$6,300.00	
Generator 25	OUKVV	9	MO	\$0.00	\$3,000.00	\$0.00	\$3,000.00		
SUBTOTAL								\$38,850.00	
Area Cost Fa	actor .						69%	\$26,806.50	
SUBTOTAL	(Local & Means)							\$30,250	
Subcontracto	or Overhead						5%	\$1,513	
SUBTOTAL								\$31,762.71	
Subcontracto	or Profit						10%	\$3,176.27	
SUBTOTAL								\$34,938.98	
	ON (Subcontractor Costs)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Weather Stat	tion	9	MO	\$0.00	\$0.00	\$360.00	\$360.00	\$3,150.00	
Camera Tool Box		35	WK	\$0.00	\$0.00	\$5.00	\$5.00	\$175.00	
TOOLDOX	•	9	MO	\$0.00	\$0.00	\$60.00	\$60.00	\$525.00 \$3,850.00	
SUBTOTAL ((Local, Means & Sub)							\$38,788.98	
Contractor O	verhead						5%	\$1,939.45	
SUBTOTAL								\$40,728.43	
Contractor Pi	rofit						10%	\$4,072.84	
TOTAL UNIT	COSTS							\$44,801	
Source of Co									
	Local vendor and costs from int Building Construction Cost Data						-		
Cost Adjustr	ment Factor:	•			•				
	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)		Not applica	able				
	• • • • • • • • • • • • • • • • • • • •					00.61			2000
	Escalation to Base Year	<u> </u>		Escalation	ractor of 1.6	uu for base ;	year of 2001,	cost information	∠00 0
	Area Cost Factor	X		0.69 locali:	zation factor	for 052 zip	code (Means)	
-	Subcontractor Overhead & Prof	X		Assumino	markuo of 10	0% each for	both Overhe	ad and Profit.	
	Prime Contractor Overhead & P			•	-				
	, into Contractor Overried of F	٠		นองนาแป	markab or 10	o /e each ior	Dom Overne	ad and Profit.	

001410110	OOT							
COMMON C	OST Sub-Element							
	JS AIR MONITORING					•	COST	WORKSHEET
3511111000	20 7 41 1 1 OTH OTH						5551	
Site:	Pownal Tannery Site							
Location:	Pownal, Vt							
Phase:	Feasibility Study							
Base Year:	2001							
Date:	Apr-01							
MI								
Work Staten	Continuous air monitoring around si of each alternative.	te perime	eter at 8 h	rs/day and 5 d	ays/wk. Co	onducted dur	ing full impler	mentation
Cost Analys	īs:							
	•						116.000	
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	UNIT TOTAL	TOTAL
	ition detector - Rent	1	MO	\$0.00	\$0.00	\$640.00	\$640.00	\$640.00
Cal-gas		i	EA	\$0.00	\$0.00	\$120.00	\$120.00	\$120.00
	ientific MG140 gas meter	1	MO	\$0.00	\$0.00	\$400.00	\$400.00	\$400.00
103L Cylinde	er of CO, H2S, O2, Pentane Cal gas	0.5	CYL	\$0.00	\$0.00	\$300.00	\$300.00	\$150.00
SUBTOTAL								\$1,310.00
						•		
Subcontracto	or Overhead	•					5%	\$65.50
SUBTOTAL	D49						4001	\$1,375.50
Subcontracto	or Profit						10%	\$137.55
SUBTOTAL								\$1,513.05
DESCRIPTION	ON (Subcontractor)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
	es - Rent (3 pair)	1	MO	\$0.00	\$0.00	\$360.00	\$360.00	\$360.00
	osol Monitor (5 Únits)	1	MO	\$0.00	\$0.00	\$360.00	\$360.00	\$360.00
Laborers (1 (@ \$55/hr)	0.25	MO	\$8,800.00	\$0.00	\$0.00	\$8,800.00	\$2,200.00
SUBTOTAL								\$2,920.00
SUBTOTAL	(Local and Subcontractor)					,		\$4,433
Contractor O	verhead						5%	\$221.65
SUBTOTAL							370	\$4,654.70
Contractor P	rofit						10%	\$465.47
TOTAL UNIT	COST/MO						ļ	\$5,120.17
					-			
: : 								
Source of Co	ost Data: Costs for rental equipment from ven	dors.					•	
Cost Adjustr	ment Factor:							
	FACTOR:			NOTES:				
	H&S Productivity (labor & equip)			NOTES:				
	• • • • • • • • • • • • • • • • • • • •							
	Escalation to Base Year			Escalation Fa	actor of 1.0	© for base y€	ear of 2001, c	ost information 2000
	Area Cost Factor			0.69 localiza	tion factor f	for 052 zip co	de (Means)	
	Subcontractor Overhead & Prof.	X				•	oth Overhead	t and Profit
				_	•			
	Prime Contractor Overhead & Prof.	Х		Assuming ma	arkup of 10	r% each for b	oth Overhead	and Profit.

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Afternative 4 Capital Cost	Sub-Element					COST	WORKS	иссті
CLEAR AND Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01			· · · · · · · · · · · · · · · · · · ·			WORKS	
Work Statem	nent: Clear and grub to facilitate excav	ation, cons	solidation	and hauling. Material to	be disposed	f of onsite.		
Cost Analys	is:		-					
DESCRIPTIO Heavy Brush SUBTOTAL	ON without Grub, Chipping	QTY 11	UNIT ACRE	LABOR EQUIP \$909.73 \$1,055.00	MTRL \$0.00	UNIT TOTAL \$1,964.73	TOTAL \$22,243.49 \$22,243	
Area Cost Fa	ctor					69%	\$15,348.01	
Subcontracto SUBTOTAL Subcontracto SUBTOTAL Contractor O SUBTOTAL Contractor Pr	or Profit verhead					5% 10% 5% 10%	\$767 \$16,115 \$1,612 \$17,727 \$886.35 \$18,613 \$1,861	
TOTAL UNIT	COST						\$20,474.62	
Source of Co	ost Data: Environmental Remediation Cost	Data, RS	Means, 6	th Edition, 2000		•		
Cost Adjustr	ment Factor:			•				
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X of. X		NOTES: Level D Escalation Factor of 1.0 0.69 localization factor Assuming markup of 10 Assuming markup of 10	for 052 zip 0% each for	code (Means both Overhe) ad and Profit.	n 2000

Alternative 4	Sub-Element								
	UST CONTROL						COST	WORKSHE	
-		- -		<u> </u>		·			
ite: ocation:	Pownal Tannery Site Pownal, Vt								
hase:	Feasibility Study								
ase Year:	2001						•		
ate:	Apr-01								
ork Stater	nent:				-				
TOIR OLLIES	Dust suppression/Pass cost at \$5	5.64/per a	acre using	3 acres; as	needed ap	plication ove	er period		
	of excavation and cap constructio	n - approx	x. 34 weel	s at 5 days/	wk and 1 pa	ass/day. Sil	t fencing with	hay bales	
	installed along access road borde							roject.	
	See Sub-Cost Worksheet for brea	akdown.	rench exc	cavation volu	ıme taken a	as 1800' x 2'	x 0.5'.		
ost Analys	is:								
							UNIT		
ESCRIPTIO	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
atering Tru	ick - dust suppression/Pass	130	PASS	\$0.00	\$0.00	\$0.00	\$166.89	\$21,695.70	
ilt Fence, poly, 3' high, adverse conditions		1800	LF	\$0.37	\$0.00	\$0.30	\$0.67	\$1,206.00	
ay Bales, Staked		1800	LF	\$0.21	\$0.07	\$2.00	\$2.28	\$4,104.00	
Place and Remove Hay Bales (maintenance)		22	TONS	\$178.00	\$57.50	\$50.00	\$285.50	\$6,281.00	
rench excar edimentatio	vation, 6" depth	70	CY	\$2.73	\$1.35	\$0.00	\$4.08	\$285.60	
edimentatio UBTOTAL :	•	1	LS	\$0.00	\$0.00	\$0.00	\$965.12	\$965.12	
ODIOINL'	mound					•		\$34,537	
rea Cost Fa	actor						69%	\$23,831	
	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
ater		7	MO	\$0.00	\$0.00	\$0.00	\$50.00	\$325.00	
UBTOTAL	(Local and means)							\$24,156	
ubcontracto	or Overhead						5%	\$1,208	
UBTOTAL							0,0	\$25,364	
ubcontracto	or Profit						10%	\$2,536	
UBTOTAL								\$27,900	
Contractor Overhead							5% .	\$1,395.00	
UBTOTAL								\$29,295	
ontractor P	TOIR						10%	\$2,929	
TINU JATC	COST							\$32,224.46	
ource of Co	ost Data:								
	Building Construction Cost Data, F	RS Means	, 58th Edi	tion, 2000; L	ocal cost e	stimate fron	an ongoing	project.	
	Environmental Remediation Cost (Dala, RS	Means, 6t	h Edition, 20	000				
							•		
st Adjustr	ment Factor:								
	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)			Not Applica	ble				
	Escalation to Base Year			Escalation I	Factor of 1.	00 for base	year of 2001,	cost information 2000	
	Area Cost Factor	X		0.69 localiza	ation factor	for 052 zip	code (Means)	•	
	Subcontractor Overhead & Prof.	X		Assumina n	both Overhe	ad and Profit.			
	Prime Contractor Overhead & Proj	<u> </u>		-					
	The Common Overled & PIO			vesouthing t	narkup or T	o /e each iof	pons Overne	ad and Profit.	

Common Co									
	Sub-Element ATION TRAPS					•	COST	WORKS	HEET
Site: Location: Phase: Base Year: Date:	Pownał Tannery Site Pownał, Vt Feasibility Study 2001								
Work Staten	nent*								
Vyork State	Basin size of 50'x25'x6'. Inlet/Ou Marked up for O&P on erosion o				6'x6'x1.5'. A	Assuming 6"	dia PE pipe.		
Cost Analys	is:								İ
									l
DESCRIPTION Geotextile note 1.5" Crushed - Delivery SUBTOTAL	on-woven	QTY 2.67 10 1	UNIT SY TON HR	ŁABOR \$0.00 \$0.00 \$0.00	EQUIP \$0.00 \$0.00 \$0.00	MTRL \$0.00 \$5.50 \$0.00	UNIT TOTAL \$1.50 \$5.50 \$40.00	\$4.00 \$55.00 \$40.00 \$99.00	
	ON (Means) Riprap, Heavy (25 to 500 lb) Polyvinyl Chloride Pipe	QTY 278 6 20	UNIT CY CY LF	\$0.34 \$3.00 \$1.72	EQUIP \$1.66 \$2.38 \$4.59	MTRL \$0.00 \$15.78 \$2.87	\$2.00 \$21.16 \$9.18	**TOTAL \$555.56	
SUBTOTAL								\$965.12	
Source of C	Fost Data: Subcontractor estimate - geotexi Environmental Remediation Cos Building Construction Cost Data Marked up for O&P on element s	t Data, RS , RS Means	Means, 6i s, 58th Edi	th Edition, 20 ition, 2000	00	cal borrow s	ource obtain	ed on 2/27/01	
Cost Adjust	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)	Level D Escalation Factor of 1.00 for base year of 2001, cost information 2000							
	Escalation to Base Year					•			KUN ZUUU
	Area Cost Factor 0.69 localization factor for 052 zip code (Means) Subcontractor Overhead & Prof. Assuming markup of 10% each for both Overhead and Profit.								
	Prime Contractor Overhead & Pto.			_	-			ead and Profit.	
Ì									

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Common Costs		·					_	
Capital Cost Sub-Element TEMPORARY ACCESS ROADS (COST PER 1)	00LF)					COST	WORKS	HEET
Site: Pownal Tannery Site				•				
Location: Pownal, Vt								
Phase: Feasibility Study								
Base Year: 2001								
Date: Apr-01								
Work Statement: Install temporary access roads into	iannons fo	r transno	rt of executate	ud matoriale	to on site et	ooksilo oroo		
Cost Analysis:	ragoons to	Попоро	I OI CAGAVAIC	u materiais	to on-site st	ockplie aleas	> .	
						UNIT		
DESCRIPTION (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Common Filt - Subgrade Crushed Stone	289	TON	\$0.00	\$0.00	\$3.00	\$3.00	\$866.67	
SUBTOTAL	48.1	TON	\$0.00	\$0.00	\$5.00	\$5.00	\$240.74	
SUBTUTAL							\$1,107.41	
DESCRIPTION (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Excavation of Fill at pit	222	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$444.44	
Loading of Fill at pit	222	CY	\$0.39	\$1.91	\$0.00	\$2.30	\$511.11	
Hauling Fill, 10 mi round trip	222	CY	\$1.66	\$5.10	\$0.00	\$6.76	\$1,502.22	
Excavation of ROC at pit Loading of ROC at pit	37	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$74.07	
Hauling ROC, 10 mi round trip	37 37	CY	\$0.39	\$1.91	\$0.00	\$2.30	\$85.19	
Prepare and roll subbase, small area	222	SY	\$1.66 \$0.43	\$5.10 \$0.63	\$0.00 \$0.00	\$6.76	\$250.37	
Spread/Compact ROC, 6" lifts	222	SY	\$0.43	\$0.59	\$0.00	\$1.06 \$0.90	\$235.56 \$200.00	
Geotechnical	1	ĔA	\$67.67	\$0.00	\$86.98	\$154.65	\$154.65	
SUBTOTAL			40.101	Ψ0.00	Ψ00.00	V107.05	\$3,457.61	
Area Cost Factor						69%	\$2,386	
SUBTOTAL (Local and Means)						,-	\$3,493	
Subcontractor Overhead						5%	\$174.66	
SUBTOTAL							\$3,667.82	
Subcontractor Profit						10%	\$366.78	
SUBTOTAL							\$4,034.60	
DESCRIPTION (Subcontractor)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
In-Place Density (Means)	1	EΑ	\$0.00	\$0.00	\$0.00	\$26.68	\$26.68	
Geotextile	222	SY	\$0.00	\$0.00	\$0.00	\$1.50	\$333.33	
SUBTOTAL							\$360.02	
SUBTOTAL (Local, Means and Sub)							\$4,394.62	
Contractor Overhead			-			5%	\$219.73	
SUBTOTAL							\$4,614.35	
Contractor Profit						10%	\$461.43	
TOTAL UNIT COST/100 LF							\$5,075.78	
Payment of Contact				•				-
Source of Cost Data: Soil material quotes from local borro	ow source.		•					
Cost Adjustment Factor:								
FACTOR:			NOTES:					
H&S Productivity (labor & equip)	[]		Level D					
Escalation to Base Year			Escalation I	Factor of 1.0	00 for base y	ear of 2001,	cost informatio	n 2000
Area Cost Factor	Х		0.69 localiza	ation factor	for 052 zip c	ode (Means)	· }	
Subcontractor Overhead & Prof.	X				•	, ,	ad and Profit.	
Prime Contractor Overhead & Prof.	X		Assuming n	narkup of 10)% each for	both Overhe	ad and Profit.	

Common Cost Capital Cost :		1 F)					COST	WORKSHEE
		<u>r)</u>						
	Pownal Tannery Site							
	Pownal, Vt Feasibility Study							
Base Year:								
	Apr-01							·
Work Statem	nent:							
	instail temporary access roads for tra	nsport of	excavate	d materials.	6 inches of	crushed sto	one.	
Cost Analys	is:					-	บพเร	
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
Common Fill		0	TON	\$0.00	\$0.00	\$3.00	\$3.00	\$0.00
Crushed Stor	ne	48.1	TON	\$0.00	\$0.00	\$5.00	\$5.00	\$240.74
SUBTOTAL								\$240.74
DESCRIPTIO	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
Excavation or		0	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$0.00
Loading of Fi		0	CY	\$0.39	\$1.91	\$0.00	\$2.30	\$0.00
Hauling Fill, 1 Excavation of	10 mi round trip	0 37	CY	\$1.66 \$0.34	\$5.10 \$1.66	\$0.00 \$0.00	\$6.76 \$2.00	\$0.00 \$74.07
Loading of R		37	CY ·	\$0.39	\$1.91	\$0.00	\$2.30	\$85.19
	i, 10 mi round trip	37	CY	\$1.66	\$5.10	\$0.00	\$6.76	\$250.37
Prepare and	rolf subbase, small area	222	SY	\$0.43	\$0.63	\$0.00	\$1.06	\$235.56
Spread/Com	pact ROC, 6" tifts	222	SY	\$0.31	\$0.59	\$0.00	\$0.90	\$200.00
Geotechnical		1	EA	\$67.67	\$0.00	\$86.98	\$154.65	\$154.65 \$999.84
SUBTOTAL								·
Area Cost Fa	ctor (Local and Means)						69%	\$690 \$931
	•						5%	\$46.53
Subcontracto SUBTOTAL	or Overnead						376	\$977.16
Subcontracto	or Profit						10%	\$97.72
SUBTOTAL								\$1,074.87
DESCRIPTION	ON (Subcontractor)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
In-Place Den	•	1	ËΑ	\$0.00	\$0.00	\$0.00	\$26.68	\$26.68
Geotextile	• •	222	SY	\$0.00	\$0.00	\$0.00	\$1.50	\$333.33
SUBTOTAL								\$360.02
SUBTOTAL	(Local, Means and Sub)							\$1,434.89
Contractor O	verhead						5%	\$71.74
SUBTOTAL							4007	\$1,506.63
Contractor P	rotit						10%	\$150.6 6
TOTAL UNIT	COST/100 LF							\$1,657.30
Source of C	ost Đata: Soil material quotes from local borro	w source.						
Cost Adjust	ment Factor:							
	FACTOR:			NOTES:				
	H&S Productivity (labor & equip)			Level D				
	• • • • • • • • • • • • • • • • • • • •	\vdash		•	Coston of t	M for her -	LUNDER OF PERO	nest information 2000
Į	Escalation to Base Year			Escalation	ractor of 1	.vu tor Dase	year of 2001	, cost information 2000
	Area Cost Factor	Х		0.69 location	zation factor	r for 052 zip	code (Means	;)
	Subcontractor Overhead & Prof.	X		Assuming	markup of 1	10% each fo	or both Overhe	ead and Profit.
1.	Prime Contractor Overhead & Prof.	X						ead and Profit.
1	Long Contactor Overhead a riol.			газанту	markup or I	. J /u GaGH IC	" POUL CACHIN	·

The annual section of the

Alternative 4								
Capital Cost PERIMETER							COST	T WORKSHEET
Site: Location; Phase: Base Year: Date:	Pownal Tannery Site Pownal, VI Feasibility Study 2001 Apr-01							
Work Staten	nent: Assuming completion time of 3 wee outside perimeter of Lagoons; Insta 1' diameter.	ks. Rei Il fence	πονe existi post every	ng fence ard 10° with con	und Lagoo crete pads	ons 1 & 2; C placed to a	onstruct fence depth of 4' a	e, around nd having a
Cost Analysi	is:							
Remove exis 7' Galvanized SUBTOTAL	DESCRIPTION ting I Chain-Link Fence	QTY 1.4 2300	UNIT 2000 LF LF	LABOR \$1.31	EQUIP \$0.00	MTRL \$26.17	UNIT TOTAL \$40,000.00 \$27.48	TOTAL \$56,000.00 \$63,204.00 \$119,204.00
Contractor On SUBTOTAL Contractor Pr TOTAL UNIT	ofit						5% 10%	\$5,960.20 \$125,164.20 \$12,516.42 \$137,680.62
						-		
Source of Co	s t Data: Building Construction Cost Data, RS Environmental Remediation Cost Da	Means	, 58th Editid Means, 6th	on, 2000 Edition, 200	0-			
Cost Adjustn	ent Factor:							
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X	l 6 ,).69 localiza Assuming m	tion factor (arkup of 10	for 052 zip o	year of 2001, code (Means) both Overhea both Overhea	ad and Profit:

					COST	TWORKSHEET
			·			·
acre/6" lift over 10	ft corresp	onds to 20 lif	ts for roughl	ly 2 acres.		
					4554	
QTY 30,976 7,744	UNIT TON TON	LABOR \$0.00 \$0.00	EQUIP \$0.00 \$0.00	MTRL \$3.00 \$5.50	**************************************	**TOTAL \$92,928.00 \$42,592.00 \$135,520.00
25,813 25,813 25,813	CY CY	\$0.34 \$0.39 \$1.66 \$0.30 \$0.40	\$1.66 \$1.91 \$5.10 \$0.76 \$1.15	MTRL \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$2.00 \$2.30 \$6.76 \$1.06 \$1.55	TOTAL \$51,626.67 \$59,370.67 \$174,498.13 \$27,362.13 \$40,010.67
						\$352,868.27
	•				69%	\$243,479 \$378,999
					5% 10%	\$18,949.96 \$397,949.06 \$39,794.91 \$437,743.97
QTY 40	UNIT EA	LABOR \$0.00	EQUIP \$0.00	MTRL \$0.00	TOTAL \$26.68	*TOTAL \$1,067.29
						\$438,811.26
					5% 10%	\$21,940.56 \$460,751.82 \$46,075.18
						\$506,827.00
		on, 2000				,
equip) X	. 	0.69 localiz	ation factor narkup of 10	for 052 zip o 0% each for	code (Means both Overhe) ead and Profit.
	QTY 30,976 7,744 QTY 25,813 25,813 25,813 25,813 25,813 25,813 25,813 26,813 27,813 28,813 29,813 29,813 20,813 2	QTY UNIT 30,976 TON 7,744 TON QTY UNIT 25,813 CY 25,813 CY 25,813 CY 25,813 CY 25,813 CY 25,813 CY 25,813 CY 25,813 EY 25,813 CY 25,814 CY 25,815 CY 25,815 CY 25,816 CY 25,817 CY 25,818	QTY UNIT LABOR 30,976 TON \$0.00 7,744 TON \$0.00 QTY UNIT LABOR 25,813 CY \$0.34 25,813 CY \$0.39 25,813 CY \$0.30 25,813 CY \$0.30 coller 25,813 CY \$0.40 QTY UNIT LABOR 40 EA \$0.00 DOM: DOM: DOM: DOM: DOM: DOM: DOM: DOM:	QTY UNIT LABOR EQUIP 30,976 TON \$0.00 \$0.00 7,744 TON \$0.00 \$0.00 QTY UNIT LABOR EQUIP 25,813 CY \$0.34 \$1.66 25,813 CY \$0.39 \$1.91 25,813 CY \$0.30 \$0.76 25,813 CY \$0.30 \$0.76 oller 25,813 CY \$0.40 \$1.15 Oller 25,813 CY \$0.40 \$1.15 Domow source on 2/27/01. Data, RS Means, 58th Edition, 2000 NOTES: Level D Escalation Factor of 1. X 0.69 localization factor Assuming markup of 1	30,976 TON \$0.00 \$0.00 \$3.00 7,744 TON \$0.00 \$0.00 \$5.50 \$5.50 \$0.00 \$0.00 \$5.50 \$0.00 \$0.00 \$5.50 \$0.00 \$0.00 \$5.50 \$0.00 \$0.00 \$5.50 \$0.00 \$0.00 \$5.50 \$0.00 \$0.	Core/6* lift over 10 ft corresponds to 20 lifts for roughly 2 acres. Core/6* lift over 10 ft corresponds to 20 lifts for roughly 2 acres. Core/6* lift over 10 ft corresponds to 20 lifts for roughly 2 acres. Core ft

Capital Cost									
	I Sub-Element MINATION PAD - HEAVY EQUIPMENT	T (PER	EACH)				COS	ST WORKSH	IFF]
Site:								THOUGH.	/
Location:	Pownal Tannery Site Pownal, Vt								
Phase:	Feasibility Study								
Base Year:									
Date:	Apr-01								
Work Staten	ment: Pad size 25 x 65; thickness of 8 inch				· · ·				
Cost Analys		ies.							
Ī		~~,		·			UNIT	•	
DESCRIPTION Construction		QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Concrete par	-	40	CY	\$78.00	\$0.98	\$116.00	\$194.98	\$7,823.27	
Gravel base		30	CY	\$1.52	\$1.62	\$18.43	\$21.57	\$7,823.27 \$649.10	
Curb		180	ĹF	\$0.68	\$0.00	\$1.06	\$21.31 \$1.74	\$313.20	
Sump hole co	construction, incl ex & gravel, pit	75	CF	\$0.46	\$0.16	\$0.56	\$1.74 \$1.18	\$88.50	
With 12" gra	ivel collar, 12" pipe, corrugated, 16ga	180	LF	\$8.25	\$2.90	\$0.50 \$11.90	\$23.05	\$4,149.00	
SUBTOTAL					Ψ	ψ11.00	Φ Δ. υ .υυ	\$13,023.07	
Area Cost Fa	actor ·						69%	•	
SUBTOTAL							0.970	\$8,986 \$22,009	
Subcontracto	or Overhead						5%	\$1,100.45	
SUBTOTAL	•						0,0	\$23,109.44	
Subcontracto	or Profit						10%	\$2,310.94	
SUBTOTAL								\$25,420.38	
Contractor O	verhead						5%	\$1,271.02	
SUBTOTAL							-/-	\$26,691.40	
Contractor Pr	rofit				-		10%	\$2,669.14	
TOTAL UNIT	COST							\$29,360.54	•
Operation:									
4" Dia Contra	actor's Trash Pump, 300 GPM	1	DAY	\$10.41	\$0.00	\$59.19	\$69.60	\$69.60	
Area Cost Fa	actor						69%	\$48	
SUBTOTAL							04.0	\$118	
Subcontracto	or Overhead						5%	\$5.88	
SUBTOTAL								\$123.51	
Subcontracto	эг Profit						10%	\$12.35	
SUBTOTAL								\$135.86	
Contractor Ov	verhead						5%	\$6.79	
SUBTOTAL Contractor Pri	Et							\$142.65	
	•						10%	\$14.26	
TOTAL UNIT	COST						•	\$156.91	
Source of Co							÷		
	Building Construction Cost Data, RSM Environmental Remediation Cost Data	Means,	58th Editi	on, 2000 h Edition, 200	nn				
Cost Adjustn		0,110	icano, on	I Lunion, 200	70				
203t Awjusin									
•	FACTOR:			NOTES:		•			
	H&S Productivity (labor & equip)			Level D					
	Escalation to Base Year			Escalation F	factor of 1.0	00 for base y	ear of 2001.	cost information 20	00
	Area Cost Factor	×				for 052 zip co			•-
	L	===							
	Subcontractor Overhead & Prof.	X		Assuming m	arkup of 10	0% each for t	oth Overhe	ad and Profit.	
	Prime Contractor Overhead & Prof.	X	• •	Assuming m	arkup of 10	0% each for t	ooth Overhe	ad and Profit.	

	sts Sub-Element IINATION PADS - PERSONNEL	•		,	-	(COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01							
Work Staten	nent: Pad size 6 x 6; thickness of 4 inches	2						
ŀ	7 23 322 3 7 3 4 110 10 13 3 1 4 110 10 10	,						
					•			
Cost Analys	is:							
DESCRIPTION Concrete - 4 Gravel base Curb SUBTOTAL	,	QTY 0.44 0.44 24	UNIT CY CY LF	LABOR \$78.00 \$1.52 \$0.68	EQUIP \$0.98 \$1.62 \$0.00	MTRL \$116.00 \$18.43 \$1.06	UNIT TOTAL \$194.98 \$21.57 \$1.74	TOTAL \$86.66 \$9.59 \$41.76 \$138.00
Area Cost Fa SUBTOTAL	actor						69%	\$95 \$233
Subcontracto SUBTOTAL Subcontracto SUBTOTAL Contractor O SUBTOTAL Contractor P	or Profit everhead						5% 10% 5% 10%	\$11.66 \$244.89 \$24.49 \$269.38 \$13.47 \$282.85 \$28.28
TOTAL UNIT								\$311.13
Source of C	ost Data: Building Construction Cost Data, RS Environmental Remediation Cost Da				00		,	
Cost Adjusti	ment Factor:							
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X		0.69 localization	ation factor narkup of 10	for 052 zip o 0% each for	ode (Means) both Overhea	cost information 2000 ad and Profit. ad and Profit.
					2			

Common Co									
DEWATER S	Sub-Element STANDING WATER IN LAGOONS						COST	WORKSH	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01							<u> </u>	
Work Stater	nent:								
	One 300 GPM pump operating for	24hrs/day	y. Pump i r	ng assumed	to take 2 we	ek to compl	et e .		
Cost Analys	iis:						٠		
DESCRIPTION 4" Dia Contro	DN actor's Trash Pump, 300 GPM	QTY 7	UNIT DAY	LABOR \$10.41	EQUIP \$0.00	MTRL \$59.19	UNIT TOTAL \$69.60	TOTAL \$487.20	
Trash pump Hose, water,		0.38 0.38 0.38 7	MO MO MO DAY	\$0.00 \$0.00 \$0.00 \$500.00	\$825.00 \$180.00 \$120.00 \$0.00	\$0.00 \$0.00 \$0.00 \$0.00	\$825.00 \$180.00 \$120.00 \$500.00	\$309.38 \$67.50 \$45.00 \$3,500.00 \$4,409.08	
Area Cost Fa SUBTOTAL	actor						69%	\$3,042 \$7,451	
Subcontracto	or Overhead						5%	\$372.57	
SUBTOTAL Subcontracto SUBTOTAL							10%	\$7,824 \$782 \$8,606.29	
Contractor O SUBTOTAL Contractor P							5% 10%	\$430.31 \$9,036.61 \$903.66	
TOTAL UNIT	COST/ROUND							\$9,940	
									-
Source of C	ost Data: Construction Cost Data, RS Means Environmental Remediation Cost [s, 58th Ed Data, RS N	ition, 2000 Means, 6tl); Local cost n Edition, 20	estimate fro	nn an ongoi	ng project.		
Cost Adjusti	ment Factor:								•
·	FACTOR: H&S Productivity (labor & equip)	[<u>1</u>		NOTES: Level D	•				
	Escalation to Base Year	旨			Factor of 1.0	0 for base y	ear of 2001,	cost information 2	2000
	Area Cost Factor	X	-	0.69 localiz	ation factor f	for 052 zip c	ode (Means)		
	Subcontractor Overhead & Prof.	Х		Assuming r	narkup of 10	% each for	both Overhea	ad and Profit.	
	Prime Contractor Overhead & Prof	. X		Assuming r	narkup of 10	% each for	both Overhea	nd and Profit.	

Common Co: Capitál Cost	st Sub-Element								
•	EAT. OF STANDING WATER IN LAGO	ONS					COST	WORKSHE	EET
Citor	Poursel Tappany Site								
Site: Location:	Pownal Tannery Site Pownal, Vt								
Phase:	Feasibility Study								!
Base Year:	2001							•	J
Date:	Apr-01								
Work Staten									1
	Treat standing water in Lagoons 1, 2,					•		~	
	2,000 lbs carbon/100,000 gals; 20,000	•	_	•	•				
•	holds 1,000 lbs of carbon and treats 50 operating for 24 hrs. Time to complete	-						-	
	lined with geotextile and backfilled with		-	-				xo xu j	
	dewatering event for duration of project		Alliano oc	sumos no gr	UGHU Wate.	recininge and	Dilly One		
Cost Analys						•			
							UNIT		
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
	gmentation Tanks	0.25	MO	\$0.00	\$0.00	\$30,000.00	\$30,000.00	\$7,500.00	
	rbon Equipment & Operation (8 Units)	1.00	WK	\$0.00	\$0.00	\$12,000.00		\$12,000.00	
Dewatering E		0.25	MO	•		-	\$1,000.00	\$250.00	
Material Cost	t - Carbon	30000	LB	\$0.00	\$0.00	\$0.65	\$0.65	\$19,500.00	
Delivery Disposal of C	Corbon	1 30000	L\$ LB	\$0.00	\$0.00	\$1.00	\$10,000.00 \$1.00	\$10,000.00 \$30,000.00	
Geotextile	Albon	22	SY	ф0.00 -	φυ.φυ	\$1.00 -	\$1.50	\$33.33	
			-				****	\$79,283.33	ļ
DESCRIPTION	NM /Maans)								
Analytical Te		12	EA	\$0.00	\$0.00	\$1,545.00	\$1,545.00	\$18,540.00	
•	Riprap, Light (10 to 100 lb)	37	CY	\$3.00	\$2.38	\$15.06	\$20.44	\$757.04	.
					•	•	•	\$19,297.04	ļ
Area Cost Fa	actor						69%	\$13,315	
SUBTOTAL	(Local & Means)	•						\$92,598.29	
Subcontracto	or Overhead						5%	\$4,629.91	
SUBTOTAL							~	\$97,228	
Subcontracto	or Profit						10%	\$9,723	
SUBTOTAL								\$106,951.02	
Contractor O	verhead						5%	\$5,347.55	
SUBTOTAL Contractor Pr							400/	\$112,298.57	
Contractor Pr	ГОВИ						10%	\$11,229.86	
TOTAL UNIT	· COST/WK							\$123,528	
Source of Co	ost Data:								
	Local costs from an ongoing project; G Construction Cost Data, RS Means, 58 Environmental Remediation Cost Data	8th Edition,	2000; Loc	cal cost estim		n ongoing proj	ject.		٠
Cost Adjusti	ment Factor:								
	FACTOR:			NOTES:					
	H&S Productivity (labor & equip)		ļ	Level D					
	Escalation to Base Year		ļ	Escalation	Factor of 1	.00 for base ye	ear of 2001, c	ost information 2000	0
	Area Cost Factor	X	I			r for 052 zip ce	,		
	Subcontractor Overhead & Prof.		ļ			10% each for b	, ,	d and Deofit	
	·	<u>×</u>			•				- 1
	Prime Contractor Overhead & Prof.	X		Assuming r	narkup of 1	10% each for b	oth Overhead	I and Profit.	
					*				

Alternative 4										
	Sub-Element						നവം	T WORKS	LEET	
EXCAVATIO)N	· · · · · · · · · · · · · · · · · · ·					<u> </u>	IWORK	וששות	
Site:	Pownat Tannery Site									
Location:	Pownał, Vt									
Phase:	Feasibility Study		•							
Base Year:	2001									
Date:	Apr-01									
Work Stater										
	Estimated time to complete excav	ation of con	taminated	l material is a	ssumed to	be 23 weeks	. Excavation	n rate of		
-	approx. 60 CY/hr/excavator, two	excavators .	Excavate	d volume = 4	0,800 CY s	ludge; 13,90	4 CY of ben	n material;		
	between Lagoons 1 and 5 and the Hauling to dewatering pads or cor	Hoosic Rive	er and bet	ween Lag 1 a	nd 5; 12,77	'8 CY cover s	soils Lagoon	11.		
Coet Analys		nsometion a	rca.		•					
Cost Analys	. · ·									
								•		
DESCRIPTION	ON	QTY	UNIT	LABOR	EALID	MTOL	UNIT	TOTAL	-	
	Truck, 6 mil liner, disposable	330	EA	\$0.00	EQUIP \$0.00	MTRL \$29.50	TOTAL	TOTAL \$9,405.00		
	overs (20 SY)	3,300	SY	• \$0.00 • \$0.16	\$0.00	\$28.50 \$1.53	\$28.50 \$1.69	\$9,405.00 \$5,577.00	,	
	soil & stockpiling, sandy toam	5,500	91	ψυ. το	ψυ.υ υ	φ1.03	Φ1.09	φ υ, 977.00	•	
	zer, adverse conditions	10,648	CY	\$0.16	\$0.70	\$0.00	\$0.86	\$9,157.28		
Excavation -		18,216	CY	\$0.48	\$2.66	\$0.00	\$3.14		Level B	
Excavation		36,488	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$72,975.25	LOTOI D	
	trucks - Level B	18,216	CY	\$0.12	\$0.64	\$0.00	\$0.75	\$13,722.68	Level B	
Loading onto	trucks	36,488	CY	\$0.05	\$0.25	\$0.00	\$0.30	\$10,946.29	2070.2	
Hauling - Lev	vel B	18,216	CY	\$0.89	\$2.48	\$2.18	\$5.55	\$101,185.16	Level B	
Hauling		36,488	CY .	\$0.63	\$1.55	\$2.18	\$4.36	\$159,086.05		
Spread on de	ewatering pads	10,440	CY	\$0.34	\$1.66	\$0.00	\$2.00	\$20,880.00		
SUBTOTAL	•							\$460,112.54		
Area Cost Fa	ector						69%	\$317,478		
Subcontracto	or Overhead						5%	\$15,873.88		
SUBTOTAL					•		070	\$333,352		
Subcontracto	or Profit						10%	\$33,335.15		
SUBTOTAL							,,,,	\$366,687		
Contractor O	verhead						5%	\$18,334.33		
SUBTOTAL								\$385,021		
Contractor Pa	rofit						10%	\$38,502		
•										
								\$423,523.13		
								•		
							•			
Source of Co	net Date.									
Jource of G	Building Construction Cost Data, f	OC Moone E	DIS Editio	~ 2000						
	Environmental Remediation Cost	Nata, RS Me	eans, 6th E	ii, 2000 Edition, 2000						
Cost Adjusti	ment Factor:									
	FACTOR:			NOTES:						
	H&S Productivity (labor & equip)	Х		NOTES:	vooreties :	of contern	olodot 458	Lobor 9 cos/ E-	vipmort	
	, , , , , , , , , , , , , , , , , , , ,			_				Labor & 60% Eq		
	Escalation to Base Year				Escalation Factor of 1.00 for base year of 2001, cost information 2000 0.69 localization factor for 052 zip code (Means)					
	Area Cost Factor	X								
	Subcontractor Overhead & Prof.			-	-			ad and Profit.		
	Prime Contractor Overhead & Pro	ī. X		Assuming m	arkup of 10	r% each for b	ooth Overhe	ad and Profit.		

Common Co	sts Sub-Element							
	NG STRUCTURES	_					COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01							
		· · · · · ·						· · · · · · · · · · · · · · · · · · ·
Work Stater	nent: Construction costs for a dewatering treatment.	structure	e, 30' x 40	o', to store sa	turated con	taminated r	naterial before	2
						•	-	•
Cost Analys	sis:							
							UNIT	
DESCRIPTION Perimeter Be	ON (Local) erm (12" height min) Construction	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
	Material - Fill	53.9	TON	\$0.00	\$0.00	\$3.00	\$3.00	\$161.78
	ON (Means)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL \$118.67
Concrete Ra		133 2	SY EA	\$0.39 \$203.93	\$0.50 \$0.00	\$0.00 \$318.26	\$0.89 \$522.19	\$1,044.38
	erm (12" height min) Construction Spread/Compact, 6" lifts	373	SY	\$0.31	\$0.59	\$0.00	\$0.90	\$336.00
SUBTOTAL								\$1,499.05
Area Cost Fa SUBTOTAL	actor (Means and Local)						69%	\$1,034 \$1,196
Subcontracti SUBTOTAL	or Overhead						5 %	\$59.81 \$1,256
Subcontracti SUBTOTAL	or Profit	•					10%	\$126 \$1,381.52
		OTV	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL
Geomembra	ON (Subcontractor) ine Liner (40mil thickness min) ionwoven, 12oz	QTY 1200 133	SF SY	\$0.00 \$0.00	\$0.00 \$0.00	\$0.00 \$0.00	\$1.00 \$1.50	\$1,200.00 \$200.00 \$1,400
SUBTOTAL	(Local, Means and Sub)							\$2,781.52
Contractor C)verhead						5%	\$139.08
SUBTOTAL Contractor F	Profit						10%	\$2,920.59 \$292.06
TOTAL UNI	гсоэт							\$3,213
	Novak Poskar							•
Source of C	Construction Cost Data, RS Means Environmental Remediation Cost E Installed costs from local subcontra	ata, RS			000			
Cost Adjus	tment Factor:							
	FACTOR:	, 		NOTES:		-laurin	an distance	•
	H&S Productivity (labor & equip) Escalation to Base Year					r Level D a OO for base		, cost information 2000
	Area Cost Factor						code (Means	
	Subcontractor Overhead & Prof.	景					-	ead and Profit.
[Prime Contractor Overhead & Prof.	=						ead and Profit.

Common Co	ete		-		 				
	sis Sub-Element								
	QUIP & MATERIALS						COS:	T WORK	SHEET
Site:	Pownal Tannery Site								
Location:	Pownal, Vt								
Phase:	Feasibilty Study								
Base Year:	2001								
Date:	Apr-01								
	<u> </u>				_			 	
Work Staten	nent:								
Cost Analys	ie.								
DESCRIPTION		QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
	ts (Per Person):	Q11	01111	LADOR	LGOIF	MILKE	TOTAL	IOIAL	
	cue, 30min, 2216psi	1	EA	\$0.00	\$0.00	\$1,819.65	\$1,819.65	\$1,819.65	
•	line Kit, Four cylinder	i	EA	\$0.00	\$0.00	\$662.50	\$662.50	\$662.50	
	e Waming Alarm	i	EA	\$0.00	\$0.00	\$220.00	\$220.00	\$220.00	
	nt Flow Airline Respirators - Full	1	ĒĀ	\$0.00	\$0.00	\$446.65	\$446.65	\$446.65	
Neoprene Ho	•	4	EA	\$0.00	\$0.00	\$257.05	\$257.05	\$1,028.20	ļ
MSA Kwik-D	-	1 .	ĒA	\$0.00	\$0.00	\$325.00	\$325.00	\$325.00	
	Sas Cylinder Safety Cabinet	0.2	ΕA	\$0.00	\$0.00	\$621.00	\$621.00	\$124.20	
	Tags, Labels & Signs	0.2	PKG	\$0.00	\$0.00	\$10.75	\$10.75	\$2.15	
SUBTOTAL					******	4.0	410.10	\$4,628.35	
								4 1,020.00	
Subcontracto	or Profit						10%	\$463	į
SUBTOTAL								\$5,091	
l									
Prime Contra	actor Profit						10% .	\$509	,
TOTAL UNIT	COST							6E 000	
TOTAL ONL	COST							\$5,600	
Monthly Cos	sts:								
Nitrile gloves		4	BOX	\$0.00	\$0.00	\$18.80	\$18.80	\$75.20	
	dispenser pack - outer	4	BOX	\$0.00	\$0.00	\$159.65	\$159.65	\$638.60	
Tyvek 1A-25	029	200	EA	\$0.00	\$0.00	\$6.65	\$6.65	\$1,330.00	
Latex Overbo	oots	200	PAIR	\$0.00	\$0.00	\$3.45	\$3.45	\$690.00	
Duct Tape		50	ROLL	\$0.00	\$0.00	\$11.45	\$11.45	\$572.50	
Caution Tape	2	20	ROLL	\$0.00	\$0.00	\$5.00	\$5.00	\$100.00	
Walkie Talki	es - Rent	6	MO	\$0.00	\$0.00	\$120.00	\$120.00	\$720.00	
Industrial Sci	ientific MG140 gas meter	3	MO	\$0.00	\$0.00	\$400.00	\$400.00	\$1,200.00	
	er of CO, H2S, O2, Pentane Cal gas	0.5	CYL	\$0.00	\$0.00	\$300.00	\$300.00	\$150.00	
	tion detector - Rent	3	MO	\$0.00	\$0.00	\$640.00	\$640.00	\$1,920.00	
Respirator W	•	10	PKG	\$0.00	\$0.00	\$15.10	\$15.10	\$151.00	
MSA Detector	or Tubes - H ₂ S	25	PKG	\$0.00	\$0.00	\$53.40	\$53.40	\$1,335.00	
	air 2.2 UN1002-T 311 CF	30	CYL	\$0.00	\$0.00	\$30.00	\$30.00	\$900.00	
316 T UHP F	łydrogen Gas	10	CYL	\$0.00	\$0.00	\$125.00	\$125.00	\$1,250.00	
SUBTOTAL								\$11,032.30	
Subcontracto	or Profit						10%	\$1,103	
SUBTOTAL								\$12,136	
Prime Contra	actor Profit						10%	\$1,214	
	•								
TOTAL UNIT	COST							\$13,349	
CYL = cylind	er		٠						
Source of C									
	Local vendors.		•						
Cost Adjusti	ment Factor:								
	FACTOR:	·		NOTES:					
	H&S Productivity (labor & equip)			Not Applica	ble			•	
	Escalation to Base Year			Base year o	costs				
				-	-				
	Area Cost Factor			Not applica	DIG				1
	Subcontractor Profit.	Х		Assuming r	narkup of	10% for Profit			
	Prime Contractor Profit.	X		Assuming r	narkup of t	10% for Profit			İ
		لئا		· ~vaning i	op Of		•		

Alternative 4					·.				
Capital Cost BACKFILL	Sub-Element						COS	T WORKSH	HEET
Site:	Pownal Tannery Site						:		
Location:	Pownal, Vt								
Phase:	Feasibility Study								ı
Base Year:	2001								·
Date:	Apr-01				··				
Work Staten	nent: Backfill excavated contaminated so Backfill 75% of Lagoon 1 to Elev. 5 Backfill estimate includes delivery, Assumed for costing that all of the	10' = 3.3 acre spreading an	es x 5 fL d compac			ced under ca	р.	4.	·
Cost Analys	is:								
								•	
	~	0774			E01115		UNIT		1
DESCRIPTION		QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	· •
	vated Material with Common Fill on 1 to Elev 510'	45,587 19,965	CY	\$0.86 \$0.86	\$1.98 \$1.98	\$5.06 \$5.06	\$7.90 \$7.90	\$360,135.25 \$157,723.50	1
backilli Lago	OII T to Elev 510	19,900	Ci	\$0.00	\$1.50	\$5.00	37.30	\$107,723.00	. 1
SUBTOTAL								\$517,858.75	1
Area Cost Fa	actor	÷			•		69%	\$357,323	
Subcontracto SUBTOTAL	or Overhead						5%	\$17,866.13 \$375,189	
Subcontracto	or Profit						10%	\$37,518.87	
SUBTOTAL								\$412,708	1
Contractor O	verhead						5%	\$20,635.38	
SUBTOTAL	rofit						10%	\$433,343	
Contractor P	ront						10%	\$43,334.29	į
TOTAL UNIT	COST							\$476,677.20	
									- 1
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									- 1
									1
								•	ľ
									·
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									ľ
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									l
	•								
Source of C	ost Data: Environmental Remediation Cost D	ata, RS Mea	ns, 6th Ed	fition, 2000					
							•		
Cost Adjust	ment Factor:								
	FACTOR: H&S Productivity (labor & equip)	<u> </u>		NOTES: Level D	•				
	Escalation to Base Year	 			Easter of 4.1	nn factors :		and information 2002	. [
						,	·	cost information 2000	' [
	Area Cost Factor	X		0.69 localiz	ation factor	for 052 zip c	ode (Means))	l
	Subcontractor Overhead & Prof.	X		Assuming r	narkup of 10	0% each for i	both Overhe	ad and Profit.	
	Prime Contractor Overhead & Prof.	X		Assuming r	narkup of 10	0% each for l	both Overhe	ad and Profit.	I
1									

Capital Cost	Sub-Element N & TREATMENT OF LEACHATE						ററാ	WORKSHEET
COLLECTIO	N & TREATMENT OF LEAGHATE	,					COST	WORKSHEET
Site: Location; Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01							
Work Staten	nent: Estimated time to complete excave Analytical monitoring for compliand	ation and in ce 40 CFR	itial instal 261 befor	lation of cap e direct disch	subgrade i narge into d	s assumed to onsite infiltration	be 16 wks. on galleries.	
Cost Analys	is:	:				-		
Rental of Car Material Cost	gmentation Tanks bon Equipment & Operation - Carbon tion of Frac. Tanks	QTY -4 -16 10000 -2 10000	UNIT MO WK LB EA LB	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	EQUIP \$0.00 \$0.00 \$0.00 \$0.00	MTRL \$1,500.00 \$1,500.00 \$0.65 \$1,000.00 \$1.00	UNIT TOTAL \$1,500.00 \$1,500.00 \$0.65 \$1,000.00 \$1.00	TOTAL \$6,000.00 \$24,000.00 \$6,500.00 \$2,000.00 \$10,000.00
DESCRIPTIO Analytical Te Hay Bales, Si Waste Pile C SUBTOTAL -	sting taked over, 135lb Tear	QTY 10 4800 1452	UNIT EA LF SY	\$0.00 \$0.21 \$0.16	EQUIP \$0.00 \$0.07 \$0.00	MTRL \$1,545.00 \$2.00 \$1.53	TOTAL \$1,545.00 \$2,28 \$1.69	TOTAL \$15,450.00 \$10,944.00 \$2,453.29 \$28,847.29
Area Cost Fa SUBTOTAL (ctor (Local and Means)				. •		69%	\$19,905 \$68,405
Subcontracto SUBTOTAL Subcontracto SUBTOTAL Contractor Or SUBTOTAL Contractor Pr	r Profit verhead ofit						5% 10% 5% 10%	\$3,420.23 \$71,825 \$7,182.49 \$79,007.35 \$3,950 \$82,958 \$8,295.77
							•	
Source of Co	ost Data: Local costs from an ongoing projec Construction Cost Data, RS Means Environmental Remediation Cost E	s, 58th Editi				m an ongoing	project,	
Cost Adjustn	ment Factor:							:
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof	X X	٠.	0.69 localiza	ation factor narkup of 1	00 for base yo for 052 zip co 0% each for b 0% each for b	ode (Means) ooth Overhea	·

Alternative 4 Capital Cost ODOR SUPP	Sub-Element						COST	WORKSHE	ET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent: Application of foam odor suppre	essant durin	g excavatio	on and capt	oing of conta	aminated mat	lerial.		
Cost Analysi	is:								
DESCRIPTIO Equipment R Labor Material cost SUBTOTAL	Rental	QTY 4 2 1	UNIT MO WK 1800 LBS	\$2,600.00	EQUIP \$2,000.00	MTRL - \$1,478.00	UNIT TOTAL \$2,000.00 \$2,600.00 \$1,478.00	TOTAL \$8,000.00 \$5,200.00 \$1,478.00 \$14,678.00	
Contractor O SUBTOTAL Contractor Pr							5% 10%	\$733.90 \$15,411.90 \$1,541.19	
TOTAL UNIT							70.2	\$16,953.09	
Source of Co	ost Data: Equipment and material costs fi	from an ongc	oing projec	t.	٠				
Cost Adjustn	ment Factor:								
	FACTOR: H&S Productivity (labor & equip Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof Prime Contractor Overhead & F	(. X		Not applica Assuming n	able markup of 10	0% each for t	both Overhea	cost information 2000 ad and Profit. ad and Profit.	

Alternative 4			· · · · · · · · · · · · · · · · · · ·							
Canital Cost Sub-Flement										
SAND LAYER							COST	WORKSHE	ETI:	
				•					$\neg \neg$	
Site:	Pownal Tannery Site								- 1	
Location:	Pownal, Vt								i	
Phase:	Feasibility Study							•.	1	
Base Year:	2001									
Date:	Apr-01									
Work Staten	nent:								ŀ	
	Thickness of sand layer taken as 1								l	
	account for side slopes. Sand ton:	= 4 acres	x 30% inc	crease x 1.5	TONS/CY =	approx. 12,	600 tons.			
									l	
									· 1	
Cost Analys	is.								- 1	
00017010190	,,,								- 1	
							UNIT			
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL		
Common Sa	nd	12,584	TON	\$0.00	\$0.00	\$5.75	\$5.75	\$72,358.00	1.	
									l	
DESCRIPTION OF		QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	i	
Excavation o Loading of S		8,389 8 380	CY CY	\$0.34	\$1.66 \$1.01	\$0.00	\$2.00	\$16,778.67	1	
	ano at pit d, 10 mi round trip	8,389 8,389	CY	\$0.39 \$1.66	\$1.91 \$5.10	\$0.00 \$0.00	\$2.30° \$6.76	\$19,295.47 \$56,711.89		
	8" layers, small dozer	8,389	CY	\$0.30	\$0.76	\$0.00	\$1.06	\$8,892.69		
	Sand, 6" to 12" lifts, vibrating roller	8,389	CY	\$0.40	\$1.15	\$0.00	\$1.55	\$13,003.47	- 1	
SUBTOTAL -	- Means							\$114,682.19	- 1	
	•						•	•	- 1	
Area Cost Fa							69%	\$79,131	i	
SUBTOTAL	(Local and Means)							\$151,489		
Subcontracto	or Overhead						5%	\$7 57 <i>4 44</i>	1	
SUBTOTAL	, oremeas		•				3%	\$7,574.44 \$159,063	- [
Subcontractor Profit							10%	\$15,906.31	l	
SUBTOTAL								\$174,969		
								•	i	
	ON (Means - Sub O&P included)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	į	
In-Place Den	sity	8	EA	\$0.00	\$0.00	\$0.00	\$38.67	\$309.36	ŀ	
Area Cost Fa	ector						69%	\$213	- 1	
SUBTOTAL							0376	\$175,182.92	ŀ	
342.3								ψ11J,102.32	- 1	
Prime Contra	ctor Overhead						5%	\$8,759.15	- 1	
SUBTOTAL								\$183,942	1	
Prime Contra	ctor Profit						10%	\$18,394.21	i	
	SOLOT								ı	
TOTAL UNIT	PRICE							\$202,336.27		
							•		- 1	
									1	
									1	
							•		i	
Source of Co									1	
	Local costs from nearby borrow sou Building Construction Cost Data, RS	rce obtair 5 Means.	ed on 2/2 58th Edit	27/01, ion. 2000					l	
Cost Adiustr	nent Factor:	, -		•					l	
							•			
	FACTOR:			NOTES:					- 1	
•	H&S Productivity (labor & equip)			Level D					- 1	
	Escalation to Base Year			Escalation I	actor of 1 i	In for base v	ear of 2004	cost information 2006	, [
						•	_	•		
	Area Cost Factor	Ľ		0.69 localiza	ation factor	tor 052 zip o	ode (Means)		
	Subcontractor Overhead & Prof.	X		Assuming n	narkup of 10)% each for	both Overhe	ad and Profit.	ľ	
Prime Contractor Overhead & Prof. X				Assuming markup of 10% each for both Overhead and Profit.						

Alternative 4 Capital Cost	Sub-Element						0007	. MODKOUEE		
GAS COLLE	CTION LAYER		<u> </u>				COST	WORKSHEET		
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01									
Work Staten	nent:									
-	Thickness of gas collection layer tal account for side slopes. Sand ton = Gas venting system costed by assu experience.	4 acres >	30% inc	rease 1.5 TO	NS/CY = ap	prox. 12,60	0 tons.	ent and		
Cost Analys	is:									
DESCRIPTIO		QTY 12,584	UNIT TON	LABOR \$0.00	EQUIP \$0.00	MTRL \$5.75	UNIT TOTAL \$5.75	TOTAL \$72,358.00		
•		-	HART	LADOD	FOLUD	METRI	TOTAL	TOTAL		
Spreading in	f Sand at pit and at pit d, 10 mi round trip 8" layers, small dozer Sand, 6" to 12" lifts, vibrating roller Wells	QTY 8,389 8,389 8,389 8,389 8,389 4	CY CY CY CY CY CY EA	\$0.34 \$0.39 \$1.66 \$0.30 \$0.40	\$1.66 \$1.91 \$5.10 \$0.76 \$1.15	MTRL \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$2.00 \$2.30 \$6.76 \$1.06 \$1.55 \$1,500.00	\$16,778.67 \$19,295.47 \$56,711.89 \$8,892.69 \$13,003.47 \$6,000.00 \$120,682.19		
Area Cost Fa SUBTOTAL	actor (Local and Means)		1		- '		69%	\$83,271 \$155,629		
Subcontracto SUBTOTAL Subcontracto SUBTOTAL	·		-				5% 10%	\$7,781.44 \$163,410 \$16,341 \$179,751		
DESCRIPTION PROPERTY IN	DN (Means - Sub O&P included) sity	QTY 8	UNIT EA	LABOR \$0.00	EQUIP \$0.00	MTRL \$0.00	TOTAL \$38.67	TOTAL \$309.36		
Area Cost Fa SUBTOTAL	actor						69%.	\$213 \$179,964.62		
Prime Contra SUBTOTAL Prime Contra	actor Overhead						5% 10%	\$8,998.23 \$188,963 \$18.896.28		
TOTAL UNIT				• .				\$207,859.13		
Source of C	ost Data:									
	Local costs from nearby borrow sou Building Construction Cost Data, R									
Cost Adjust	ment Factor:					,				
FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor X					NOTES: Level D Escalation Factor of 1.00 for base year of 2001, cost information 2000 0.69 localization factor for 052 zip code (Means)					
	Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.		Assuming markup of 10% each for both Overhead and Profit. Assuming markup of 10% each for both Overhead and Profit.							

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Alternative 4 Capital Cost GEOSYNTH	Sub-Element						COST	WORKS	HEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent: Place geolextile filter fabrics be	etween sand lay	ers within	n cover syste	m and adja	cent coverin	ng fine grains	ed material.	
Cost Analys	is:								
DESCRIPTION Geotextile	, nc	QTY 50,335	UNIT SY	LABOR -	EQUIP -	MTRL -	UNIT TOTAL \$1.50	TOTAL \$75,503.24	
SUBTOTAL	- Local							\$75,503.24	
Prime Contra SUBTOTAL Prime Contra	actor Overhead actor Profit						5% 10%	\$3,775 \$79,278 \$7,928	
TOTAL UNIT	COST							\$87,206	:
÷		·							
<u>.</u>									
			-						
Source of Co	ost Data: Cost estimate from local vendo	r obtained on 3	/20/01.						
Cost Adjustr	ment Factor:								
	FACTOR: H&S Productivity (labor & equip Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof Prime Contractor Overhead & F	X X	-	0.69 localization	ation factor narkup of 10	for 052 zip o 0% each for	code (Means both Overhe	, cost information) ead and Profit. ead and Profit.	2000

	Sub-Element E SUPPORT LAYER						COST	WORKSHEET
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01		-					
Work Staten	nent: 26" layer of vegetative support soil Layers to be placed in lifts of 6" and of cap for testing ~ 4 acres, 4 lifts/a	d in-place o	density tes	sting complet	ted at a rate	of 1 test/ac	re/lift. Approx	x. area
Cost Analys	is:							
DESCRIPTIO Common Sar	•	QTY 27,265	UNIT TON	LABOR \$0.00	EQUIP \$0.00	MTRL \$5.75	UNIT TOTAL \$5.75	TOTAL \$156,775.67
Spreading in	f Sand at pit	QTY 18,177 18,177 18,177 18,177 18,177	CY CY CY CY CY CY	\$0.34 \$0.39 \$1.66 \$0.30 \$0.40	EQUIP \$1.66 \$1.91 \$5.10 \$0.76 \$1.15	MTRL \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$2.00 \$2.30 \$6.76 \$1.06 \$1.55	TOTAL \$36,353.78 \$41,806.84 \$122,875.77 \$19,267.50 \$28,174.18 \$248,478.07
Area Cost Fa SUBTOTAL (actor (Local and Means)						69%	\$171,450 \$328,226
Subcontracto SUBTOTAL Subcontracto SUBTOTAL							5% 10%	\$16,411.28 \$344,637 \$34,463.68 \$379,100.49
DESCRIPTIO In-Place Den	ON (Means - Sub O&P included)	QTY 18	UNIT EA	LABOR \$0.00	EQUIP \$0.00	MTRL \$0.00	TOTAL \$38.67	TOTAL \$696.06
Area Cost Fa SUBTOTAL	actor						69%	\$480 \$379,580.78
Prime Contra SUBTOTAL Prime Contra	actor Overhead						5% 10%	\$18,979.04 \$398,560 \$39,855.98
TOTAL UNIT	PRICE				÷			\$438,415.80
Source of Co	ost Data: Local costs from nearby borrow sou Building Construction Cost Data, RS							
Cost Adjustr	ment Factor:					V		
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X		0.69 localiza	ation factor markup of 10	for 052 zip o 0% each for	code (Means) both Overhe	cost information 2000 and Profit. and Profit.

Alternative 4 Capital Cost	Sub Floment								
TOPSOIL	Oub-Liement						COST	WORKS	HEET
Site:	Pownal Tannery Site					•	-		
Location:	Pownal, Vt								
Phase:	Feasibility Study							÷	*
Base Year:	2001				•				
Date:	Apr-01				 				
Work Staten	nent: 6" layer of topsoil over an approxim volumetric weight of topsoil = 1.5 TC					ccount for si	ide slopes. A	ssuming	
Cost Analys	is:								
							UNIT		
DESCRIPTION	ON (Local)	QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Common Top		6,292	TON	\$0.00	\$0.00	\$11.50	\$11.50	\$72,358.00	
				1					
DESCRIPTION		QTY	UNIT	LABOR	EQUIP	MTRL	TOTAL	TOTAL	
Excavation of To	f Topsoil at pit	4,195 4,195	CY	\$0.34 \$0.39	\$1.66 \$1.91	\$0.00 \$0.00	\$2.00 \$2.30	\$8,389.33 \$9,647.73	
	soil, 10 mi round trip	4,195	CY	\$1.66	\$5.10	\$0.00	\$6.76	\$28,355.95	
	ation, 67% Level, 33% Slope	4	ACRE	\$22.05	\$40.14	\$0.00	\$62.19	\$248.76	
Fine Grading		19,360	SY	\$0.06	\$0.15	\$0.00	\$0.21	\$4,065.60	
SUBTOTAL	÷.							\$50,707.37	
Area Cost Fa SUBTOTAL (ector (Local and Means)						69%	\$34,988 \$107,346	٠
Cubanatanata	or Overhand							¢ E 267 20	
Subcontracto SUBTOTAL	Overnead						5%	\$5,367.30 \$112,713	
Subcontracto	or Profit						10%	\$11,271.34	•
SUBTOTAL								\$123,985	
Contractor O	verhead						5%	\$6,199.24	
SUBTOTAL					•			\$130,184	
Contractor Pi	rolit						10%	\$13,018.40	
TOTAL UNIT	COST							\$143,202.36	
,						•			
Source of Co	ost Data:			-					
	Local costs from nearby borrow sou Building Construction Cost Data, RS Environmental Remediation Cost Da	S Means, !	58th Editio	on, 2000	1				
		.,	,	,			-		
Cost Adjusti	ment Factor:								
	FACTOR: H&S Productivity (labor & equip)			NOTES: Level D					
	Escalation to Base Year				Eactor of 4.4	OO for book	war of 2004	cost information	2000
		무							
	Area Cost Factor					-	code (Means)		
	Subcontractor Overhead & Prof.	L		-	•			ad and Profit.	
	Prime Contractor Overhead & Prof.	X		Assuming n	narkup of 1	0% each for	both Overhe	ad and Profit.	

, description of the second

Alternative 4 Capital Cost : DRAINAGE 5	Sub-Element					-	COST	WORKSHEET	
Site: Location: Phase: Base Year: Date:	Pownal Tannery Site Pownal, Vt Feasibility Study 2001 Apr-01								
Work Staten	nent: Estimate of material required to built perimeter of cap footprint, width of 1 geotextile. An allowance for two herdrainage outlet structures.	0' and d	epth of 2'	, consisting	of 10 to 100	lb rîprap ov	ver nonwove	n	
Cost Analys	is:				-				
	DN (Means) Riprap, Heavy (25 to 500 lb) Riprap, Light (10 to 100 lb)	QTY 60 1602	UNIT CY CY	LABOR \$3.00 \$3.00	EQUIP \$2.38 \$2.38	MTRL \$15.78 \$15.06	UNIT TOTAL \$21.16 \$20.44	TOTAL \$1,269.60 \$32,744.88	
SUBTOTAL		4						\$34,014.48	
Area Cost Fa	ctor						69%	\$23,470	
SUBTOTAL Prime Contra SUBTOTAL	or Profit actor Overhead	QTY 7212	UNIT SY	LABOR	EQUIP -	MTRL	5% 10% 5% 10% UNIT TOTAL \$1.50	\$1,173.50 \$24,643 \$2,464 \$27,108 \$1,355.39 \$28,463.23 \$2,846.32 \$31,309.56 TOTAL \$10,818.00	
Prime Contra SUBTOTAL	clor Overhead						5%	\$540.90 \$11,358.90	
Prime Contra SUBTOTAL	ctor Profit						10%	\$1,135.89 \$12,494.79	
TOTAL UNIT	COST							\$43,804	
						,			
Source of Cost Data: Environmental Remediation Cost Data, RS Means, 6th Edition, 2000 Geotextile estimate from local subcontractor for installed material, includes subcontractor's markup for overhead and profit.									
Cost Adjusti	ment Factor:						•		
	FACTOR: H&S Productivity (labor & equip) Escalation to Base Year Area Cost Factor Subcontractor Overhead & Prof. Prime Contractor Overhead & Prof.	X X X		0.69 localiz	ation factor narkup of 10	for 052 zip 0% each fo	code (Means r both Overh	i, cost information 2000 s) ead and Profit. ead and Profit.	

Common costs Capital Cost Sub-Element **COST WORKSHEET** LAND USE RESTRICTIONS Site: Pownal Tannery Site Location: Pownal, Vt Phase: Feasibility Study Base Year: 2001 Date: Apr-01 Work Statement: Zoning/Deed restrictions Cost Analysis: UNIT DESCRIPTION QTY UNIT LABOR **EQUIP** MTRL TOTAL TOTAL Legal Preparation 120 HR \$150.00 \$0.00 \$0.00 \$150.00 \$18,000.00 Engineering Support 80 HR \$75.00 \$1.62 \$18.43 \$95.05 \$7,604.00 Filing 1 LS \$0.00 \$0.00 \$2,000.00 \$2,000.00 \$2,000.00 SUBTOTAL \$27,604.00 Contractor Overhead 5% \$1,380.20 SUBTOTAL \$28,984.20 Contractor Profit 10% \$2,898.42 TOTAL UNIT COST \$31,882.62

Source of Cost Data:

Engineering judgement